AUTHOR INDEX
VOLUME 55

Abbe, Kazuhiko, 652
Abbott, Sharon L., 3070
Abell, Tessa J., 1047
Abernethy, Karen, 899
Abiko, Yoshimitsu, 2538
Abou-Zeid, Christiane, 3213
Abraham, Soman N., 923
Achiwa, Kazuo, 2287
Aho, Ellen L., 1009
Aikawa, Masamichi, 2928
Aizawa, Miki, 3137
Akai, Tetsuo, 2912
Akamatsu, Yuzuru, 57
Akiyama, Shin-Ichiro, 2287
Akuffo, Hannah, 564
Alberts, Marco, 1900
Albrich, J. Michael, 2518
Albright, Joseph F., 358
Albright, Julia W., 358
Alderete, John F., 1037, 1957
Allen, Janice B., 674
Allen, Philippa M., 2662
Allen, Rebecca L., 1184
Almerigogna, Fabio, 803
Alouf, Joseph E., 1641
Amako, Kazunobu, 1600
Amano, Fumio, 57
Amano, Ken-ichi, 2290
Amano, Shigeru, 947
Anacker, Robert L., 825
Andersen, Roxanna N., 1198
Anderson, David C., 1000
Anderson, Tina R., 3204
Andremont, Antoine, 1019
Andrews, Susan W., 1399
Apicella, Michael A., 882, 1755
Appelberg, Rui, 2006
Appelgren, Lars-Erik, 1906
Appelmelk, Ben J., 462
Araki, Seiichi, 2164
Arbittier, Douglas, 1715
Arbuthnott, John P., 2841
Arciniega, Juan L., 1132
Ariyaratne, Y. G., 2604
Armstrong, G. D., 1294
Arnold, Roland R., 288
Arthur, Jill E., 1381
Asai, Takashi, 1332
Asao, Tsutomu, 1594
Ashkenazi, Shai, 472
Atkinson, Carter T., 2928
Atkinson, Susan J., 2148
Audibert, F., 2658
Audibert, Francoise M., 1498
Auriault, Claude, 1163
Austin, Faye E., 240
Ayakawa, Gregg Y., 2759
Aylward, J. H., 364
Azuma, Ichiro, 1279

Baca, Oswald G., 1731
Baddour, Larry M., 2870
Bailey, Gordon B., 1848
Baker, Carol J., 2404
Baker, Phillip J., 2619, 3085, 3093
Baldini, Mary M., 78
Balish, Edward, 1951, 2000
Balish, Marion J., 2000
Ballhaus, S., 1997
Balloul, Jean-Marc, 1163
Banda, Diane, 2956
Barbet, Anthony F., 1381, 2428
Barbieri, Joseph T., 1321, 1647
Barbour, Alan G., 2311
Barcinski, Marcello A., 3142
Barclay, G. R., 2706
Barczynski, Lisa K., 1843
Barile, Michael F., 1126
Barlow, Ann K., 2734
Baron, L. S., 2797
Barrett, John F., 792
Barrett, Leah J., 2526
Barrett, Theresa A., 792
Barrette, William C., Jr., 2518
Barrish, James P., 3168
Barritt, Diana S., 1927, 2026
Barron, Almen L., 2317
Barrow, Paul A., 388
Bartholeyns, Jacques, 2230
Bartizal, Kenneth F., 2000
Bartoloni, A., 963
Bartow, Rebecca A., 314
Baseman, Joel B., 49, 3023
Basker, Christopher J., 2830
Bassford, Philip J., Jr., 1106, 2255
Batteiger, Byron E., 1767
Battershill, Janet L., 2531, 2841
Bauss, Frieder, 1622
Bauwens, Denise, 2496
Bayer, Arnold S., 843, 3030
Beachey, Edwin H., 923, 2416
Beaman, LoVelle, 2951
Beaudoin, Richard L., 604
Becker, Ronald E., 2378
Beer, Karen B., 2701
Beezhold, Donald H., 2865
Bellanti, Joseph A., 99
Bender, Gary R., 2597
Benedict, Charles D., 1106
Bennedsen, Jørgen, 2922
Bennett, John E., 1751, 2088
Benzaquen-Geffin, Rebecca, 342
Berche, Patrick, 1641, 2822
Bergbauer, H., 2274
Berk, Richard S., 1728
Bernheimer, Alan W., 3209
Berthold, Peter, 2332
Berwald, Luc G., 1466
Bessen, Debra, 141
Best, Gary K., 2865
Beuvery, E. Coen, 253
Bhakdi, Sucharit, 104, 206, 2933, 2940
Bhatnagar, Pradip K., 1077
Biagiotti, Roberta, 803
Bijvoet, O. L. M., 2110
Binns, Matthew M., 388
Bird, Philip S., 771
Bisno, Alan L., 753
Bjornson, Gordean L., 2268
Black, Carolyn M., 1635
Black, Diane, 1523
Black, John R., 1927
Black, Robert E., 1116
Black, William J., 2465
Blackstock, Rebecca, 233
Blackwood, Linda L., 639
Blake, Milan S., 1190
Blalock, Donna K., 2631
Blanchard, D. Kay, 433
Blaser, Martin J., 1256, 1564
Bleiweis, A. S., 2695, 2759
Blobel, Hans, 1878
Blomqvist, Lennart, 1906
Bloom, Barry R., 1000
Boesman-Finkelstein, Mary, 451
Bogard, Warren C., Jr., 899
Bohach, Gregory A., 428
Bolin, Carole A., 1239
Bonventre, Peter F., 2865
Boom, Willem H., 2223
Boose, Dorothy S., 2293
Booth, Barbara A., 451
Booth, J. L., 1751
Boros, Dov L., 2625
Bortolussi, R., 3197
Bosmans, Roger, 245
Boulnois, Graham J., 1184, 2662, 3228
Bourlioux, P., 1686
Bourne, F. John, 2653
Boushell, Lee W., 2759
Boyer, Michael J., 1094
Boykins, Robert A., 1819
Boyle, Michael D. P., 1914
Brack, Charlotte M., 1264
Brade, Helmut, 462, 482, 2636
Brade, Lore, 462, 482, 2636
Brandenburg, Klaus, 2636
Braun, V., 2554
Brazil, G. M., 2208
Bree, Annie, 193
Brendel, W., 1997
Brennan, Michael J., 487
Brennan, Patrick J., 2860
Brestel, Eric P., 1813
Brinkmann, Volker, 990
Britt, Lorene A., 227, 2590
Britton, Warwick J., 1000
Broder, Christopher C., 1914
Brogden, Kim A., 2047
Broitman, Selwyn A., 2962
Broman, Jennifer, 2327
Bronson, Roderick, 835
Brown, Albert L., 1077
Brown, Douglas, 1728
Brown, Douglas R., 154
Brown, Jacqueline G., 1
Brown, James F., 381, 2061
Brown, J. Edward, 298, 1533
Brown, Robert R., 1890
Brown, Ronald F., 892
Brubaker, Robert R., 572
Brummer, Elmer, 3221
Buchanan, Thomas M., 1000, 1190, 2860
Buchmüller-Rouiller, Yolande, 587
Buckley, Helen R., 2324
Bucklin, A., 1668
Buggs, Adrienne M., 2378
Bukholm, Geir, 2816
Bundle, David R., 762
Burg, Kornel, 2857
Burger, Carol J., 2215
Burger, Eva, 1919
Burns, Drusilla L., 24, 1132
Burns, Jeanne M. S., 1725
Burr, Donald H., 1431
Burton, Louis E., 2727
Butler, Karina M., 2404

Caldwell, Harlan D., 93, 2570
Calich, Vera L. G., 1919
Campagnari, Anthony A., 882
Campbell, Gary H., 2928
Campbell, Lee Ann, 1359
Cannon, Janne G., 1009, 1927, 2026
Capron, André, 1163
Carbon, Claude, 742, 749
Carlier, Yves, 2496
Carlin, Nils I. A., 1412
Carniel, Elisabeth, 277
Carter, Richard, 369
Cartwright, Frank D., 1830
Cassell, Gail H., 731, 1314, 2631, 2838
Catterall, James R., 1635
Caugant, Dominique A., 1503
Cerquetti, M. Cristina, 99
Chaffin, Donald O., 2585
Chakraborty, T., 2274
Chan, K. H., 211
Chang, Kwang-Poo, 1692
Chang, Patrick P., 1854
Chang, Yung-Fu, 2348
Charlab, Rosane, 3142
Charlton, Ronald K., 2359
Charoenvit, Yupin, 604
Charreire, Jeannine, 749
Chau, P. Y., 211
Chedid, Louis, 1426, 1498, 2658
Chen, Priscilla B., 2534
Chenevert, Janet, 3225
Chenoweth, Dennis E., 1867
Cheung, Ambrose L., 843
Chhatwal, Gursharan S., 1878
Chi, Emil Y., 1324
Chida, Kingo, 1476
Chinchilla, M., 1513
Chiofalo, Maria Stefania, 839, 3057
Chong, Kong-Teck, 668
Choromanski, Leszek, 403
Christensen, Gordon D., 2870
Chu, Shu-heh W., 3126
Ciardi, Joseph E., 1441
Cieplak, Witold, 2546
Cimasoni, Giorgio, 1484
Cisar, John O., 487
Cisneros, Ronald, 835
Ciurana, Blanca, 2741
Clark, Richard L., 16
Clark, Virginia L., 1359, 2844
Clarke, Ian N., 2734
Cleary, P. Patrick, 1233, 2448
Cleat, Peter H., 1151
Clegg, Steven, 281
Cleland, David R., 16
Clements, Mary Lou, 1116

Clerc, Philippe L., 521, 2681
Closs, Otto, 1000
Cluff, Christopher W., 1346
Clyde, Wallace A., Jr., 1126
Cobbold, Steve P., 2037
Cohen, Jonathan D., 2777
Cohen, Michael K., 314
Cohen, Mitchell B., 329
Cohen, Mitchell L., 3117
Cohen, Paul S., 2884
Cohn, Deirdre A., 1375
Cole, Garry T., 657, 1970
Coleman, S. E., 2695
Collier, Albert M., 1126
Collier, R. John, 1321, 1647
Collins, Frank M., 1701
Collins, William E., 2928
Colston, M. Joseph, 3149
Commins, Laura M., 2074
Condez, Aida, 2017
Connell, Terry D., 1927
Contrepois, Alain, 742, 749
Cooke, David W., 1289
Cookson, Brad T., 2117
Cope, Leslie D., 1979
Corbeil, Lynette B., 1381, 1403
Cornell, C. Peter, 304
Correa-Oliveira, Rodrigo, 1884
Corthier, G., 1801
Corthier, Gérard, 1019
Cossart, Pascale, 3225
Coutinho, Iona, 1728
Cowan, Marjorie M., 1522
Cowell, James L., 916
Cox, N. R., 2838
Cox, Rebecca A., 227, 1058, 2590
Craven, Donald E., 753
Cray, William C., Jr., 477
Crissman, Harry A., 1731
Cromartie, William J., 16
Crowle, Alfred J., 2945
Crowley, Paula J., 2695, 2759
Cryz, S. J., Jr., 942, 1547
Curtis, Jill, 564
Curtis, Michael A., 352
Curtiss, Roy, III, 792, 2891, 3035
Czarniecki, Christine W., 2727
Czuprynski, Charles J., 381, 1588, 2061

Dailey, Don C., 1541
Dale, James B., 2416
Dallas, Walter S., 1106, 1329
Dammonneville, Martine, 1163
Daniel, Larry W., 3209
Darken, Jill, 2483
da Silva, Luiz Pereira, 1387
da Silva, Rosangela, 2802
Daskaleros, Panagiotis A., 594, 1393
Date, Satsuki, 2538
David, John R., 2223
David, Peter H., 2604
Davidson, M. K., 2838
Davis, Carolyn H., 2420
Davis, Jerry K., 2631, 2838
Davis, J. K., 1314
Day, Diane B., 1848
Dearborn, Dorr G., 559
DeBoynton, Elaine D., 2701
De Bruyn, Jacqueline, 245
Defize, P., 2110
De Groot, Ronald, 2585
Deinhart, Tracy, 1867
de Jong, M. H., 621
de la Maza, Luis M., 2727
Delius, M., 1997
Demartini, James C., 3215
Deměs, Pavol, 1037
de Ree, Johannes M., 2204
Desai, Bhupesh B., 358
de Silva, Y. N. Y., 369
Devalon, Melissa L., 2398
Dhaliwal, Jasbir S., 645
D'Hauteville, Hélène M., 193
Dho, Maryvonne, 193
Diamond, Richard D., 2783
Dimmer, Cheryl, 1862
Dimmick, James E., 2268
Dixon, Patricia S., 1033
Djeu, Julie Y., 433
Doig, Peter, 1517
Dolegeal, M., 1686
Domer, Judith E., 2619
Dougherty, Patricia, 2332
Douglas, Steven D., 1715
Dournon, Eric, 2234
Doyle, Ronald J., 1552
Dröge, Wulf, 1622
Dromer, Françoise, 742, 749
Druilhe, Pierre, 888
Dubey, J. P., 784
Dubois, Philippe, 1387
Dubos, F., 1801
Duchesne, Lorraine G. M., 1051
Dudas, Kathleen C., 882
Duffey, Paul S., 3070
Duncan, James L., 373
Duncan, J. Robert, 762
Dunn, Bruce E., 1564
Dunn, David L., 899
Dunny, Gary M., 1170
Durack, David T., 1289
Dvorak, James A., 1490
Dybvig, K., 2838
Dyer, David W., 2171
Dyer, Roger A., 2268
Dzuback, April L., 1399

Eckert, Thomas F., 1895
Edelstein, Paul H., 2701
Edwards, Morven S., 2404
Eerola, Erkki, 201
Eissenberg, Linda Groppe, 29
Ekenna, Okechukwu, 1558
Elkins, Karen L., 2619, 3085, 3093
Ellen, Richard P., 2391
Elliott, Greg R., 2398
Elsbach, Peter, 2142
Enders, G. A., 1997
Ennist, David L., 2619
Erdos, Gregory W., 2759
Etkin, Lori A., 3209
Etoh, Yumiko, 3001
Evans, Claudia, 2993
Evans, Timothy M., 1359, 2844

Fabušová, Helena, 1037
Fahey, James R., 490
Fairweather, Neil F., 2541
Falkow, Stanley, 1674, 2465
Falmagne, Paul, 245, 1184
Faltin, Y., 2554
Fandeur, Thierry, 1387
Farley, Monica M., 1536
Fava, Concetta, 839
Fazioli, Raquel A., 1919
Fendly, Brian M., 1867
Feng, Hui M., 7
Fernsten, Philip D., 1680
Ferrante, Antonio, 1047
Ferretti, Joseph J., 837
Ferrieri, Patricia, 1243
Fick, Robert B., Jr., 541
Fiederlein, Roger L., 135
Filler, Steven J., 2341, 2409
Finkelstein, Richard A., 451
Finn, Theresa M., 942
Firon, Nurit, 472
Fischetti, Vincent A., 502, 3237
Fischlschweiger, W., 2695
Fiss, Ellen, 2324
Fitzgerald, Thomas J., 1023, 2066
Fives-Taylor, Paula M., 123
Flament, Jocelyne, 2496
Fohn, Melinda J., 3065
Folkening, W. Joseph, 2117
Formal, S. B., 2797
Fortier, A. H., 1707
Foster, Timothy, 3103
Fourniat, J., 1686
Fox, Alvin, 1526
Fox, Eben S., 2962
Foy, Hjordis M., 1830
Frandsen, Ellen V. G., 631
Franklin, Angus L., 1523
Frantz, Joseph C., 1077
Franzblau, Scott G., 680
Frasch, Carl E., 1503, 1652
Fraser, Blair A., 1819
Frederick, David, 2747
Frehel, Claude, 2916
Frenkel, J. K., 856
Freudenberg, Marina, 758, 2230
Friedman, Herman, 433, 1369
Friedman, Richard L., 129, 135
Friedrich, Loretta M., 937
Frøholm, L. Oddvar, 1503
Fromm, Susanne, 206
Fujii, Hiroaki, 3137
Fujimura, Setsuo, 716
Fukazawa, Yoshimura, 2164
Fukui, Kazuhiro, 169
Fukui, Komei, 266
Fukushi, Kazue, 2290
Fürer, E., 1547
Furuta, Hiroaki, 1936

Gaillard, Jean-Louis, 1641, 2822, 3225
Galán, Jorge E., 3181
Galanos, Chris, 409, 758, 2230
Galgiani, John N., 135
Gallin, John I., 2088
Gamazo, Carlos, 609
Gander, Rita M., 293
Ganz, Tomas, 568, 1365
Garcia-Ortigoza, Ethel, 1132
Garland, Suzanne M., 414
Garner, Ronald E., 2619
Garrett, B., 1314
Garrett, Linda K., 1077
Gary, Lisa A., 2074
Garza, Guillermo E., 1037
Gaskell, Rosalind M., 2653
Gaylord, Harvey, 2860
Geelen, Lea, 2355
Geoffroy, Christiane, 1641, 3225
George, W. L., 198
Germanier, R., 942, 1547
Giannella, Ralph A., 329
Gibson, Carter C., 1490
Gilbart, James, 1526
Gill, Sarjeet S., 1300
Gillis, Thomas P., 1000
Gillis, Zoe A., 1070
Gilsdorf, Janet R., 2308
Ginsburg, Hagai, 342
Giudizi, Maria Grazia, 803
Glasser, Lewis, 135
Glaven, Judith A., 3174
Goebel, Werner, 1940, 2274
Goetz, Matthew Bidwell, 534
Gogolewski, Ronald P., 1403
Goldhar, Janina, 1837
Goldman, Michel, 2496
Goldman, William E., 29, 528, 2117
Goldstein, Ira M., 2956
Golecki, Jochen R., 1837
Golenbock, Douglas T., 2471
Gombošová, Anna, 1037
Gómez-Miguel, María J., 258
Gonzales, Frank R., 2993
Goodger, B. V., 364
Goodrum, Kenneth J., 1101
Goossens, Herman, 1019
Gordon, Mark R., 1476
Goren, Mayer B., 1663
Goroncy-Bermes, Peter, 2416
Gotschlich, Emil C., 141
Graeff, Alan S., 1137
Granger, Donald L., 1289
Gras-Masse, H., 1498
Gray, Patrick W., 2727
Green, Bruce A., 2878
Greenberg, David P., 3030
Greenwald, Gary I., 1365
Gregory, Richard L., 2341, 2409
Grenier, Daniel, 111, 3131
Griffiss, J. McLeod, 1755, 1792
Grinstein, Sergio, 864
Groothuis, Dick G., 1466
Grosskinsky, Clemens M., 2378
Grove, David A., 2391
Grubbs, Barry, 223, 2387
Gruffydd-Jones, Timothy J., 2653
Guay, Colleen, 600
Guerrant, Richard L., 1924, 2526
Guerry, P., 2797
Guinée, Piet A. M., 2093
Gulig, Paul A., 513, 2891
Gupta, Mala R., 882
Gupta, Ranu, 2378
Gurman, Gabriel, 1523
Gysin, Jurg, 1387

Haak, Richard A., 2579
Haapasalo, Markus, 201
Habbick, Brian F., 2364
Hacker, Jörg, 1940
Hackstadt, Ted, 1144
Hadlow, W. J., 1004
Hagberg, L., 1224
Hall, Nancy K., 233
Hammond, B. F., 686, 692
Hanazawa, Shigemasa, 947
Hancock, Michael L., 2669
Hancock, Robert E. W., 2531, 2841
Handa, Toshiya, 2300
Hansen, Eric J., 513, 1944, 1979, 2902, 2993
Harada, Kazuhiro, 57
Harayama, Shigeaki, 2208
Harboe, Morten, 245, 3213
Harmon, Cecily C., 2341
Harper, Carolyn C., 1848
Harper, John R., 1680
Hart, C. Anthony, 2662
Harwig, Sylvia S. L., 2281
Hasegawa, Akira, 57, 1279
Hasegawa, Koji, 263
Hashim, Raida, 1862
Hasløv, Kaare, 2922
Hastings, Robert C., 1203
Hasty, David K., 2103
Hattori, Kunihiro, 2715
Heath, David G., 1233
Heath, Joan K., 2148
Heckels, John E., 2734
Heesemann, Jürgen, 455
Heffron, Fred, 2774
Heine, Holliday C., 2378
Heinzen, Robert A., 848
Hembry, Rosalind M., 2148
Henry-Amar, Michel, 1019
Henson, Peter, 2262
Hermanstorfer, Lisa, 513, 2902
Heron, Iver, 2922
Herrington, Deirdre A., 979
Hewlett, Erik L., 217
Hill, David R., 3155
Hill, Jeri L., 721
Hill, Lori A., 2074
Hill, Nanette L., 1047
Hillman, Jeffrey D., 1399
Hilton, Tracy, 2341
Himeno, Kunisuke, 3078
Hinson, Gary, 393, 1734
Hirayama, Norio, 1779
Hirose, Kimiharu, 947
Hitchcock, Penny J., 1190
Hodinka, Richard L., 2255
Hof, H., 2274
Hojo, Sachiko, 698
Hollingshead, Susan K., 3237
Holmes, Randall K., 1529, 1854
Holmgren, Jan, 1116
Honda, Takeshi, 451
Hood, Anthony, 2902
Hook, Edward W., III, 3065
Hook, Reuel R., Jr., 2240
Hoover, C. I., 2721
Hopkins, Cheryl A., 2191
Hopkins, Walter J., 1951
Horiguchi, Yasuhiko, 2912
Horikawa, Masahiro, 1126
Hornung, Jan M., 1300
Horowitz, S. A., 1314
Hoschutzky, Heinz, 1837
Hoshino, Etsuro, 871
Howard, Dexter H., 1014
Howard, Russell J., 2754
Hu, Ping C., 1126
Huang, Yuan-sheng, 1126
Hubbard, S. Catherine, 2378
Hubbard, Todd W., 3065
Hughes, H. P. A., 784
Hughes, John L., 1077
Hugo, Ferdinand, 2933, 2940
Huhle, B., 2274
Hull, R., 1224
Hull, Richard A., 3017, 3168
Hull, S., 1224
Hull, Sheila I., 3168
Hultgren, Scott J., 373
Hurst, James K., 2518
Hussein, Shabir, 564
Husson, Robert N., 2223
Hwang, W. S., 1176
Hynes, Wayne L., 837

Iaconis, Joseph P., 2984
Iandolo, John J., 837
Ibrahim, Awad A., 2093
Ichinose, Yoshio, 1090
Igarashi, Takeshi, 3001
Ikawa, Satio, 2768
Inzana, Thomas J., 1403, 1573, 1580
Irvin, Randall T., 1517, 1523
Isayama, Yasuro, 1607
Isberg, Ralph R., 1674
Ishibashi, Yoshio, 1762
Ishikawa, Hitoshi, 1607
Ito, Akiharu, 909
Ito, Teiichiro, 871
Ito, Yoshihiro, 3162
Ivanyi, Juraj, 1000
Iwanaga, Masaaki, 1090
Iwata, Masayuki, 547

Jackson, Mary Ann, 2902
Jakubowski, Adam, 2502
James, Stephanie L., 317, 1339, 1884, 3174
James, Stephen P., 1137
Janda, J. Michael, 3070
Jann, Barbara, 1837
Jann, Klaus, 1837
Jarvis, Gary A., 174, 1755
Jechorek, Robert P., 2689, 2834
Jensen, Allen E., 1239
Jensen, James B., 1722
Jerrells, Thomas R., 1252
Jeurissen, Suzan H. M., 253
Jingushi, Seiya, 1600
John, S. R., 2721
Johns, Margaret A., 320
Johnson, Gayle C., 2215
Johnson, Mary K., 1184
Johnson, Shirley, 93
Johnston, Barbara P., 2383
Joiner, Keith, 273
Jolivet, M., 2658
Jolivet, Michel E., 1498
Jones, Bradley D., 2198
Jones, Craig A., 1029
Jones, Garth W., 2645
Jones, Kevin F., 502
Jones, Kevin R., 2176
Jones, Richard E., 2132
Joralmon, Richard A., 487
Jouin, Hélène, 1387
Joyce, M. Patricia, 2327
Judd, Ralph C., 273
Julien, Raymond Alphonse, 1216
Jungery, Michele, 187
Junio, Lucille N., 2052

Kagaya, Keiko, 2164
Kagermeier, Angelika S., 1198
Kaiser, Allan, 1541
Kamata, Yoichi, 1594, 3051
Kamp, E. M., 2110
Kania, S. A., 1668
Kania, Stephen A., 1403
Kanoh, Seizaburo, 2456
Kao, Linda, 2142
Kaper, James B., 78, 477, 2370
Kapp, Alexander, 758
Kapperud, Georg, 2247, 2816
Kappus, Elizabeth, 1137
Karadsheh, Adli J., 1722
Karch, Helge, 455, 3117
Karmali, M., 1824
Kashino, Suely S., 1919
Kasmala, Lorraine, 1037
Kasper, Lloyd H., 778
Kass, Edward H., 414
Kato, Hirohisa, 266
Kato, Keijiro, 169
Kato, Keiko, 1594
Kato, Tetsuo, 3192
Katz, Jenny, 2341
Kaufmann, Stefan H. E., 2037
Kawamoto, Yasuko, 2121
Kawamura, Ikuo, 3078
Kawamura, Shinichi, 2490
Kawasaki, Hajime, 1121, 2574
Kawasaki, Hironoshin, 2456
Kawata, Shigeo, 1279
Kaya, Shunji, 2290
Kayes, Stephen G., 2132
Kehoe, Michael A., 3228
Keith, Jerry M., 497, 1309, 2546
Kelly, Niamh M., 2841
Kelly, Sandra M., 3035
Kendrick, Mary I., 414
Kenimer, James G., 24
Kenny, George E., 616, 1830
Kent, Lenore, 1421
Keragalla, I., 369
Keulen, Wilco J., 1466
Khakpour, Fatemeh R., 1657
Kharazmi, Arsalan, 986
Khusmith, Srisin, 888
Kibor, Alfred, 3219
Kierszenbaum, Felipe, 2461
Kilgarriff, Charles, 899
Kilian, Mogens, 631
Kilpatrick-Smith, Laurie, 1715
Kim, Charles W., 2436
Kim, Pyeung-Hyeun, 2984
Kim, Taijong, 1332
Kim, Youngki, 1243, 1862
Kimman, T. G., 2110
Kimura, Alan, 1979, 2902
Kimura, Makoto, 2164
Kingston, Ann E., 3149
Kink, John A., 1692
Kinouchi, Takemi, 420
Kirkland, Theo N., 657
Kiso, Makoto, 57, 1279
Kitano, Shigeo, 947
Kitoh, Kyosuke, 2164
Klapper, David G., 2026
Klein, Thomas W., 433, 1369
Klimpel, Kenneth W., 1359
Klimpel, Kurt R., 528
Kline, Mark E., 2579
Knapp, Joan S., 931
Knudson, Gregory B., 1859
Knutton, Stuart, 69, 78, 86, 393
Kobayashi, Akio, 1017
Kobayashi, George S., 1355
Kobayashi, Masashi, 1332
Kobayashi, Yuzuru, 2490
Kodama, Kazuya, 2490
Kodama, Takao, 169
Koga, Tetsuya, 2300
Koivuranta-Vaara, Paivi, 2956
Kojima, Hiroshi, 3137
Kojima, Somei, 1332
Kokeguchi, Susumu, 169
Kolenbrander, Paul E., 1198, 1441
Kolk, Arend H. J., 1000, 1466
Komiyama, Kunio, 2364
Kondo, Isamu, 2768
König, W., 2554
Kopecko, D. J., 2797
Korhonen, Timo, 3168
Kornegay, Ervin T., 217
Kosma, Paul, 462
Kotani, Shozo, 57, 494, 1279
Kothary, Mahendra H., 626
Kovacs, Joseph A., 727
Kozaki, Shunji, 1592, 3051
Kozel, Thomas R., 1890, 1895
Kraft, William G., 2789
Krahenbuhl, James L., 446, 680, 1203
Krakowka, Steven, 2789
Kramer, R. H., 2721
Krat, Cynthia, 1718
Kreger, Arnold S., 3209
Krivan, Howard C., 1873
Kubo, Shuichiro, 711
Kuhn, Hella-Monika, 2636
Kuhn, Raymond E., 403
Kuller, Gabriele, 206
Kung, Patrick C., 899
Kunkel, Steven L., 1867
Kuo, Cho-Chou, 1324
Kuo, Susan, 2841
Kuramitsu, Howard K., 2176
Kusumoto, Shoichi, 57, 1279, 2636
Kutsukake, Hiroshi, 1279
Kwon-Chung, K. J., 1490, 1751, 3207
Kyle, J. E., 784

Lafont, Jean-Pierre, 193
LaForce, F. Marc, 2293
Lallinger, Gunther J., 1289
Lam, Joseph S., 1051, 2854
Lam, Michele Y. C., 1051, 2854
Lambert, Philippe, 2496

Lam-Po-Tang, Michael K.-L., 393
Landale, Edwin C., 3011
Lang, A. B., 1547
Larjava, Hannu, 201
Larrick, James W., 1867
Lau, Agnes, 1441
Laufs, Rainer, 455
Laughon, Barbara E., 1610
Laux, David C., 2884
Lawlor, Kathleen M., 594
Lazzell, Anna, 49
Leachman, Sancy, 2993
Leake, Eva S., 1476
Learn, Douglas B., 1813
Leatch, G., 364
Lebenthal, Emanuel, 3044
Lederer, James A., 381
Lee, Adrian, 828, 995
Lee, Chi-Jen, 1819
Lee, Jean C., 2191
Lee, Ping-Cheung, 3044
Leech, James H., 2754
Leef, Mary F., 604
Lehner, T., 810, 1274
Leirisalo-Repo, Marjatta, 507
Leitch, Gordon J., 181
Lencer, Wayne Isaac, 3126
Leong, Jenny, 1106
Lerch, Robert A., 16
Leunk, Robert D., 2789
Leventhal, Jack P., 1635
Levine, Michael J., 2320, 3006
Levine, Myron M., 455, 979, 1063, 1116, 3117
Levitz, Stuart M., 2783
Lewis, Fred A., 1339
Li, Han, 1252
Li, Jean P., 1819
Lian, Chang-joo, 1176
Libaek, Lita B., 2052
Libby, Peter, 3188
Lien, Mary H., 2378
Liew, F. Y., 645
Liggitt, H. Denny, 1403
Lillard, S. E., 686, 692
Lillehoj, Hyun S., 1616
Lima, Aldo A. M., 2526
Lin, Shin, 1610
Lin, Ti, 639
Lindberg, Alf A., 1412
Lindquist, Bo L., 3044
Linzer, Rosemary, 3006
Lior, Hermy, 3117
Lipovsek, Dasa, 2378
LiPuma, John J., 2308
Lise, L. D., 2658
List, Robert H., 825
Liu, Teh-yung, 916
Liu, Teresa, 916
Ljungqvist, Lene, 2922
Lloyd, David R., 69, 86
Lo, Reggie Y. C., 1987, 3233
Locht, Camille, 497, 2546
Loeb, Marilyn R., 2612, 2977
Loeffelholz, Michael J., 2296
Loegering, Daniel J., 2074
Logan, Susan M., 828
London, Jack, 1198
López, José, 258
Lottenberg, Richard, 1914
Lovell, Margaret A., 388
Löwik, C. W. G. M., 2110
Lu, Melvin C., 2378
Lu, Yue-Shoung, 2967
Luft, Benjamin J., 2436
Lyman, Caron A., 2783
Lyness, Valerie A., 2541

Ma, J. K.-C., 1274
MacDonald, Leslie A., 1051, 2854
Macedo, Paula M., 2006
Macher, Ingolf, 2636
Machida, Katsuhiko, 2768
MacInnes, Janet I., 1626
Mackie, Palmer, 2370
Macrina, Francis L., 123, 2176
Maddaus, Michael A., 2689, 2834
Maeda, Hiroshi, 2509
Magee, D. Mitchell, 1843
Magnusson, K.-E., 1224
Mahe, S., 1801
Maher, Kevin O., 2370
Mahuzier, G., 1686
Mainil, Jacques G., 3111
Mäkelä, P. Helena, 507
Mallavia, Louis P., 848
Manclark, Charles R., 24, 916, 1132
Mandell, Gerald L., 1784, 2783
Mandress, Robert E., 1755
Maneval, David R., 1063
Mankinen-Irvin, Paula M., 1523
Mann, Raymond E., 825
Männel, Daniela N., 1622
Marchitto, Kevin S., 497, 1309, 2546
Marciano-Cabral, Francine, 2442
Marone, Gianni, 803
Marquis, Robert E., 2597
Maruyama, Haruhiko, 2042
Maskell, Duncan J., 2541
Massey, Linda, 2967
Mastroeni, Pasquale, 839, 3057
Masur, Henry, 727
Masuzawa, Toshiyuki, 2287
Mathew, Ranjit C., 2625
Mathison, Bruce, 1580
Matsubara, Shuzo, 2715
Matsumoto, Masahiko, 2715
Matsumura, Yasuhiro, 2509
Matsuno, Takashi, 2715
Matsuno, Yoshihiro, 3137
Mattingly, Stephen J., 2383
Mauël, Jacques, 587
May, Mary H., 2945
May, Michael E., 2304
Mayer, Hubert, 2850
Mayrand, Denis, 111
Mazer, Mark A., 727
Mazert, Marie-Christine, 1963
Mazie, D., 2658
Mazigh, Daniel, 277
McArthur, William P., 2759
McBride, Barry C., 1484, 3131
McCabe, Mead M., 1900, 3011
McCabe, William R., 320, 753
McCall, R. Dale, 1884
McCallus, Daniel E., 1042
McCann, Peter P., 2461
McConnell, Moyra M., 1929
McCormack, Jeffrey M., 233
McCracken, George H., Jr., 513, 1979, 2902, 2993
McCray, Gina F. A., 1441
McDaniel, James P., 1490
McDonald, Gregory A., 825
McDonald, Thomas L., 1737
McGee, Zell A., 1190
McGhee, Jerry R., 2341
McGuire, Travis C., 2428, 3219
McKerrow, James H., 2807
McMurray, David N., 314
McNeish, Alexander S., 69, 78, 86, 393
McShan, W. Michael, 3017
McSweegan, Edward, 1431
Medoff, Gerald, 1355
Medvitz, Lisa A., 1884
Mehra, Vijay, 1000
Meikle, Murray C., 2148
Mekalanos, John J., 477
Mellencamp, Martha A., 1737
Meltzer, M. S., 1707
Mendelman, Paul M., 2585
Mendis, Kamini N., 2604, 369
Mendonça-Previato, Lúcia, 3142
Mengaud, Jérôme, 3225
Mercereau-Puijalon, Odile, 1387
Merrick, Joseph M., 3044
Metcalfe, Edmund C., 1037
Meyers, Desiree, 1728
Michael, Rodney A., 227
Michalek, Suzanne M., 2341
Michon, Francis, 2191
Mietzner, Timothy A., 3065
Mikx, F. H. M., 621
Millar, Stephen J., 2320, 2534
Miller, Elizabeth E., 1979
Miller, Kathleen M., 559
Miller, Lorna, 3228
Miller, Louis H., 2754
Mills, John, 1743
Milner, Yoram, 342
Minami, Akira, 1436
Minnear, Fred L., 2074
Mintzer, Carole L., 314
Mirelman, David, 472
Mishra, Lalji, 1529
Misonou, Jun, 3137
Mitchell, Colin G., 810
Mitchell, Michael J., 1610
Mitchison, N. Avrion, 3149
Mitsutomi, Masaru, 698
Mitsuyama, Masao, 1600, 2300, 2477
Miwatani, Toshio, 1090
Miyama, Akio, 2121
Miyasaki, Kenneth T., 1029
Miyoshi, Niriko, 1936
Miyoshi, Shin-ichi, 1936
Miyoshi, Takehito, 947
Mizuguchi, Yasuo, 2477
Mizuno, Kazuya, 3137
Mobley, Harry L. T., 2198
Mocca, Louis F., 1503, 1652
Mock, B. A., 1707
Modrzakowski, Malcolm C., 2296
Molla, Akhteruzzaman, 2509
Mollaret, Henri H., 277
Montie, Thomas C., 3204
Moon, Harley W., 555, 3111
Moos, Abbie, 1144
Mor, Natan, 1663
Moreno, Edgardo, 2850
Morgan, Donna R., 2789
Moriya, Tetsuhiro, 1600
Moriyama, Masami, 1121, 2574
Moriyón, Ignacio, 258, 609, 2850
Morris Hooke, Anne, 99
Morrison-Plummer, Janice, 49
Morse, Stephen A., 3065
Moseley, Steve L., 555
Moss, Joel, 1854
Mounier, Joëlle, 1963, 2822
Mounier, Joelle, 521
Mouricout, Michèle Andrée, 1216
Moyer, Mary Pat, 1533
Muhly, Marion, 206
Mulks, Martha H., 931
Muller, E. L., 198
Müller, Ingrid, 2037
Müller-Berghaus, Gert, 1878
Munesinghe, Yamuna D., 369
Munford, Robert S., 974
Munoz, J. J., 1004, 1309
Murai, Toshimi, 2456
Murata, Teizo, 1784, 2783
Murphy, Cheryl F., 2327
Murphy, George L., 1009
Murphy, Juneann W., 1657
Murphy, Timothy F., 882
Murray, P. A., 2721
Musa, Shirley A., 1862
Musoke, Anthony J., 3219
Musser, James M., 1207, 2585
Muthukkaruppan, V. R., 816, 822
Myler, Peter J., 2428
Myrvik, Quentin N., 1476

Nacy, C. A., 1707
Nagao, Shigeki, 1279
Nagasawa, Hideyuki, 2928
Nagata, Kumiko, 335
Naiki, Masaharu, 711
Naito, Y., 832
Naitoh, Mariko, 2574
Nakamoto, Shin-Ichi, 2287
Nakamura, Seiji, 3078
Nakamura, Shin-ichi, 1436
Nakamura, Takeshi, 716
Nakasone, Noboru, 1090
Nakazawa, Futoshi, 871
Nakeeb, Shaheen M., 2502
Namork, Ellen, 2247
Nano, Francis E., 482
Nariuchi, Hideo, 2574
Nasmith, Patricia E., 864
Nassif, Xavier, 1963
Nataro, James P., 2370
Natori, Takashi, 3137
Nawa, Yukifumi, 2042
Neiders, Mirdza E., 2534
Neill, Roger J., 2675
Nesbakken, Truls, 2247
Nevola, Joseph J., 2884
Newhall, Wilbert J., V, 162

Newland, John W., 2675
Newton, Catherine A., 1369
Ng, M. H., 211
Nichols, Everett J., 616
Nickerson, Deborah A., 937
Nicosia, A., 963
Niiyama, Tetsuji, 3137
Nikaido, Yoshihiko, 2477
Nishijima, Masahiro, 57
Nishimori, Kei, 711
Nnalue, Ndubisi A., 955
Nogami, Wallace, 2117
Noji, Sumihare, 2538
Nokkaew, Comnuan, 1848
Nomaguchi, Hiroko, 1000
Nomoto, Kikuo, 2300, 2477, 3078
Nomura, Hitoshi, 2715
Nonomura, Isao, 711
Norcross, Neil L., 1042
Norgard, Michael V., 2993
Novitsky, T. J., 1668
Nowicki, Bogdan, 3168
Nowlan, Peter, 3103
Nugent, Kenneth M., 541
Nurminen, Marjatta, 507
Nyabenda, Jean, 245

Oaks, Edwin V., 1156
O'Brien, Alison D., 455, 2526, 3117
O'Brien, James P., 1792
Ofek, Itzhak, 472, 968
Offenbacher, Steven, 2262
Ogasawara, Jun, 3051
Ogawa, Tomohiko, 57, 494
Ogawa, Yoshiyuki, 2456
Ohashi, Norio, 2290
Ohashi, Tatsuya, 1436
Ohishi, Iwao, 909, 1461
Öhman, L., 1224
Ohmori, Yoshihiro, 947
Ohnishi, Yoshinari, 420
Ohta, Hiroyuki, 169
Ohtani, Yusaku, 2574
Oikawa, Kiyoshi, 3137
Oka, Mikio, 3162
Okamoto, Keinosuke, 2121
Okamoto, Kyoko, 2121
Okamura, Haruki, 57, 335
Okamura, Ryoichi, 2509
Okinaga, Kota, 1774
Okuda, K., 832
Okuda, Katsuji, 3192
Okuda, Yasuhisa, 2126
Oliver, James D., 269
Olivier, Martin, 467
Omholt, Paul E., 2132
Onderdonk, Andrew B., 835
Ono, Masayoshi, 2715
Opferkuch, Wolfgang, 2416
Orefici, Graziella, 3057
Orme, Ian M., 3215
Oshiro, Lyndon S., 3070
Ota, Fusao, 266
Ott, Manfred, 1940
Overmann, Gary J., 329
Owhashi, Makoto, 2042
Ozaki, Yukio, 1436

Pai, Chik H., 1176
Painter, Audrey, 1355
Pakes, Steven P., 2967
Palermo, Deborah A., 1359, 2844
Palmer, Guy H., 2428
Panton, Lindsey J., 2754
Pappagianis, Demosthenes, 2807
Pâques, Marcel, 2093
Parker, Charlotte D., 154
Parker, Robert F., 2631
Parrillo, Joseph E., 727
Parrisius, Jürgen, 206
Parsonnet, Jeffrey, 1070
Patel, Arvind H., 3103
Patrick, Christian C., 513, 1979, 2902
Paulsen, Hans, 462
Payne, Dawn, 2436
Payne, Nathaniel R., 1243
Payne, Shelley M., 594, 1393
Peacock, M. G., 1004
Pearson, Richard D., 3155
Pedersen, Bente K., 986
Peene, Sandra S., 123
Peiris, J. S. M., 2604
Pekny, Katherine W., 1680
Penner, J. L., 1806
Pennie, Ross A., 2526
Peppler, M. S., 1294
Pereira, Miercio E. A., 3188
Perera, K. L. R. L., 2604
Perez, Norma E., 2191
Perez-Perez, Guillermo I., 1256
Perfect, John R., 1289
Perry, R., 1837
Perryman, Lance E., 2081
Perugini, M., 963
Pesanti, Edward L., 736, 2747
Peters, Julius, 843
Peterson, Arnold A., 974
Peterson, Ellena M., 2727
Petri, William A., Jr., 2327
Petric, M., 1824
Petro, Thomas M., 1085
Pfrommer, Gail S. T., 1890
Phillips, Marshall, 2047
Phillips, Nigel C., 1426
Pier, Gerald B., 600, 1070, 2191
Pierce, Nathaniel F., 477
Pierce, Raymond J., 1163
Piessens, Willy F., 2223
Pilkington, Neylon S., 2359
Pitt, H. A., 198
Playfair, John H. L., 877
Pocidalo, Jean-Jacques, 2234
Polin, Richard A., 1715
Poole, Joyce, 2355
Pope, Richard M., 1058
Popoff, Michel R., 35
Porat, Reuven, 320
Porter, Katherine K., 2332
Post, David, 2348
Poulter, Len W., 2017
Powell, C., 2797
Prakash, Sadhana, 3188
Preheim, Laurel C., 1737
Preissner, Klaus T., 1878
Preston, Martin A., 1806
Prioli, Reginaldo P., 3188
Pritchard, Todd J., 123
Procell, Patricia M., 2928
Proctor, R. A., 2155
Proctor, Richard A., 2471
Pruckler, Janet, 281
Pruul, Hendrik, 1047
Pucci, Michael J., 2176
Purcell, Bret K., 281

Que, John U., 579
Quinn, Thomas C., 1137
Quinn-Dey, Tammy, 2878

Rabert, Douglas K., 2645
Rabson, Arthur R., 2777
Radolf, Justin D., 2993
Raetz, Christian R. H., 2471
Ragheb, Samia, 2625
Rajagopalan, Premavathy, 2234
Ramasesh, Nalini, 1203
Ramphal, Reuben, 600
Rank, Roger G., 1767, 2317
Rapp, Vicki J., 1207
Rappuoli, Rino, 963, 1321
Rasko, Istvan, 2857
Rastogi, Nalin, 2916
Ravdin, Jonathan I., 2327
Ray, Paul H., 1106
Reddy, M. Sreenivasulu, 3006
Regelmann, Warren F., 2398
Register, Karen B., 2420
Rehg, Jerold E., 2669
Reichwein, Johannes, 2933, 2940
Reiner, Steven L., 1289
Reinholdt, Jesper, 631
Reiser, J., 942
Remington, Jack S., 990, 1635
Repesh, Lillian A., 1023
Repo, Heikki, 507
Resnick, Steven, 2807
Rest, Richard F., 2579
Reyes, L., 1513
Reyes, Liliana, 856
Reynolds, Christopher M., 2689
Reynolds, Eric C., 1264
Reynolds, Homer S., 2320, 2534
Reynolds, John J., 2148
Ricardo, Manuel J., Jr., 1476
Rice, Peter A., 1792
Rice, Robert M., 1156
Richard, Stéphane, 2822
Richardson, Gloria J., 2341
Richardson, Kathleen, 477
Richardson, Stephen H., 626
Richmond, Shirley J., 2653
Richter, Alexander G., 1070
Riethman, Harold C., 1094
Rietschel, Ernst T., 2636
Riggs, Michael W., 2081
Rikihisa, Yasuko, 2215
Riley, Lee W., 2052
Rinderknecht, Ernst, 2727
Rivera, Maria Teresa, 2496
Rizk, Norman W., 1635
Robbins, Phillips W., 2378
Roberts, Elisabeth C., 3215
Roberts, Ian, 2662
Robins-Browne, Roy M., 979, 3117
Robinson, Edward N., Jr., 1190
Robinson, Renée E., 594
Rode-Bramanis, K., 364
Rodrigues, Mauricio Martins, 3142
Rodriguez, Mario H., 187
Rodriguez-Ortega, Morella, 968
Roka, Ladislaus, 104
Rolfe, Rial D., 2984
Romagnani, Sergio, 803
Rook, Graham A. W., 2017, 3213
Roop, R. Martin, II, 217
Rosendal, Søren, 1626
Rosenthal, Raoul S., 2117, 2579
Ross, Elise J., 2945
Roth, Margit, 2940
Rothenberg, Ralph J., 2311
Rothman, Sara W., 1533
Rotstein, Ori D., 864
Rowe, Bernard, 1336, 1929
Rowe, Judy I., 639
Rubens, Craig E., 2314
Ruitenberg, E. Joost, 2093
Rundegren, Jan, 288
Runnels, Paul L., 555
Rurangirwa, Fred R., 3219
Ryter, Antoinette, 521

Sacks, David L., 2802
Sadoff, J. C., 1547
Sadowski, Peter L., 3111
Sakaguchi, Genji, 1594, 2912, 3051
Sakai, D. K., 704
Sakurai, Susumu, 2768
Salamero, Jean, 742
Salgame, Padmini R., 3149
Salkowski, Cindy A., 2000
Samagh, Bakhshish S., 762
Sandberg, Ann L., 487
Sandvig, Kirsten, 298
Sansonetti, Philippe J., 193, 521, 1963, 2681, 2822
Santha, Miklos, 2857
Sato, Hiroko, 909, 2546
Sato, Hisaaki, 1774
Sato, Michiko, 871
Sato, Naomi, 871
Sato, Yuji, 909
Saunders, Jon R., 2662
Savage, Dwayne C., 2483
Sawyer, Daniel W., 1784
Scannapieco, Frank A., 2320
Schachter, Julius, 223, 2387
Schadow, Sabine, 1718
Schaeffer, Anthony J., 373
Schaper, Ulrike, 1126
Scheffer, J., 2554
Scheifele, David W., 2268
Schifferli, Dieter M., 923
Schiffman, Gerald, 1375
Schlecht, Siegfried, 211, 482
Schlesinger, D., 2658
Schlesinger, D. H., 1498
Schlievert, Patrick M., 428
Schloemer, Robert H., 1541
Schmoll, Thomas, 1940
Schneider, Herman, 1755, 1792
Schöffler, H., 2554
Schoolnik, Gary K., 2052
Schramek, Stefan, 482

Schreiber, John R., 2830
Schwab, John H., 16
Schwalbe, Richard S., 2026
Schwan, William R., 373
Schwarz, Susanne, 2391
Scotland, Sylvia M., 1336
Scott, B. B., 2706
Scott, June R., 3237
Sedegah, Martha, 604
Seeger, Werner, 104
Seetharama, Subramani, 1813
Seibert, Gerhard, 206
Seid, R., 2797
Sekizaki, Tsutomu, 2208
Selander, Robert K., 1207, 1503, 2585
Selsted, Michael E., 2281
Serfass, Debra A., 2585
Seymour, Gregory J., 771
Shafer, William M., 1536, 2420
Sharma, Somesh D., 990, 2137
Sharon, Nathan, 472, 968
Shenker, Bruce J., 2332
Sher, Alan, 1884
Sherertz, Robert J., 1558
Sherman, P., 1824
Shero, Marlene, 1755
Shewen, Patricia E., 1987
Shiba, Tetsuo, 57, 1279
Shibata, Ken-ichiro, 263
Shimamoto, Tatsuya, 169
Shimizu, Tadayori, 2287
Shimote, Yumi, 3051
Shimozato, Takaichi, 547
Shinnick, Thomas M., 1718, 1932
Shinoda, Sumio, 1936
Shiratsuchi, Hiroe, 2126
Shoji, Koh, 335
Siber, George R.,1668, 2830
Sibley, L. David, 446, 680, 2137
Sikkema, Daniel J., 572
Silva, Manuel T., 2006
Silva, M. Nazaré T., 2006
Silverblatt, Fredric J., 534
Simecka, Jerry W., 731, 2631
Simmons, Richard L., 2689, 2834
Simpson, Joan M., 388
Simpson, Lance L., 118
Simpson, Linda M., 269
Simpson, W. Andrew, 2103, 2870
Simpson, Warren J., 2448
Singer-Vermes, Lúcia M., 1919
Singh, Gur Jai Pal, 1300
Sinner, Anke, 2933, 2940
Sinsky, Richard J., 217
Sjoerdsma, Albert, 2461
Skurnik, Mikael, 2247
Slot, Jan W., 438
Small, Pamela L. C., 1674
Sminia, Taede, 253
Smith, Daniel J., 2562
Smith, Donald W., 1862
Smith, Joe W., 1381
Smith, Laurie D., 2774
Smith, Nicola R., 1517
Smith, R., 810, 1274
Smith, Roger D., 2327
Smith, Susan G., 497
Smithers, Jane, 3117
Snyder, Edward L., 1564
Sokol, Pamela A., 2021
Sondermeijer, Paul, 1163
Song, Meja, 1484
Soni, R., 1824
Sordelli, Daniel O., 99
Sorensen, Ricardo U., 559
Southam, Gordon G., 1051
Spagnuolo, Philip J., 2304
Sparling, P. Frederick, 2171
Speer, C. A., 784
Speert, David P., 2531
Sperry, Jay F., 1725
Spitalny, George L., 490, 1252
Spitznagel, John K., 1536, 2420
Sprouse, Ronald F., 2240
Spry, Christopher J. F., 877
Stamm, Lola V., 1106, 2255
Stanton, Thad B., 304, 309
Stashak, Philip W., 2619, 3085, 3093
Steele, Christopher R., 2359
Steele, Jenny, 2017
Steele, Russell W., 2359
Stefanu, Constantine, 2967
Stein, Jeanne, 1900
Steven, Alasdair C., 916
Stevens, David A., 3221
Stevens, R. H., 686, 692
Stewart, Scott, 93, 2570
Stewart, William E., II, 433
Stiles, Bradley G., 118
Stilis, Harold F., Jr., 2240
Stimpson, Stephen A., 16
Stinson, Murray W., 3044
Stipkovits, Laszlo, 2857
Stocker, B. A. D., 892, 955
Stover, Charles K., 1156
Strathdee, Craig A., 1987, 3233
Straus, David C., 1, 44
Striker, Robert, 2579
Strockbine, Nancy A., 2675
Struck, Douglas K., 2348
Stull, Terrence L., 148
Su, C. J., 3023
Su, W. J., 1686
Sugden, Edward A., 762
Sugimura, Takaaki, 711
Sugiyama, Katsumi, 1936
Sullam, Paul M., 1743
Sullivan, James A., 1784, 2783
Sun, S. H., 657
Sundstrom, Paula M., 616
Sutton, Scott V. W., 2597
Suttorp, Norbert, 104
Suzuki, Akira, 916
Suzuki, Yasuhiro, 1017
Suzuki, Yukio, 1936
Svanborg-Edén, C., 1224
Svennerholm, Ann-Mari, 1116
Swan, Judith C., 727
Sweetser, Douglas, 1932

Tacket, Carol O., 455, 1063
Tai, Po-Chun, 877
Takada, Haruhiko, 57, 409, 1279
Takahashi, Ichiro, 57
Takahashi, Mitsuyoshi, 3001
Takahashi, Nobuhiro, 652
Takahashi-Abbe, Shoko, 652
Takamori, Kenshiro, 3001
Takashima, Tetsuya, 1701
Takayama, Kuni, 2311
Takazoe, I., 832
Takeda, Tae, 1090
Takiguchi, Hisashi, 2538
Tall, Ben D., 979
Tam, Milton, 273
Tamburini, Mario, 803
Tamura, Akira, 2290
Tamura, Masahiko, 2715
Tamura, Toshihide, 57, 335
Tamura, Yutaka, 1779
Tanabe, Masao J., 1090
Tanaka, Atsushi, 1121, 1279, 2574
Tanaka, Mayumi, 1779
Tanaka, Shigenori, 57
Tanaka, Yoshio, 711
Tancrede, Cyrille, 1019
Taniguchi, Shigehiko, 2538
Tanner, Charles E., 467
Targett, Geoffrey A. T., 877
Tarsio, Maureen, 3111
Tartar, A. L., 1498
Taubman, Martin A., 2562
Taverne, Janice, 877
Taylor, Hugh, 93
Taylor, K. Grant, 1552
Teppema, Jacob S., 2093
Teti, Giuseppe, 839, 3057
Thelestam, Monica, 1906
Thesingh, C. W., 2110
Thijssen, Henricus M. W. M., 1447, 1455
Thole, Jelle, 1932
Thole, Jelle E. R., 1466
Thomas, Linda V., 1136, 1929
Thomas, Peter, 2962
Thomas, Virginia L., 293
Thompson, John, 352
Thompson, Michael, 2865
Thompson, Michael R., 329
Thorp, Randall B., 2631
Tiesjema, Rudy H., 1466
Timmis, Kenneth N., 1151, 2208
Timoney, John F., 3181
Todd, Tom, 1517, 1523
Toffaletti, Dena L., 1289
Tokiwa, Hiroshi, 547
Tomás, Juan M., 2741
Tomasello, Francesco, 839, 3057
Travis, Sharon, 1355
Trust, Trevor J., 828
Truyens, Carine, 2496
Tryon, V. V., 3023
Tsai, Chao-Ming, 1652
Tsai, Ying-Chuech, 414
Tsang, Raymond S. W., 211
Tsubura, Eiro, 547
Tsujimoto, Masachika, 57
Tsutsui, Hideshi, 420
Tsuyuguchi, Izuo, 2126
Tumber, Satwant K., 2364
Turco, Jenifer, 240
Turell, Michael J., 1859
Turk, John L., 564
Turneer, Mireille, 245
Twiddy, Edda M., 1854
Tzipori, Saul, 979, 3117

Udagama, Preethi V., 2604
Udezulu, Ifeanyi A., 181
Udhayakumar, V., 816, 822
Uehling, David T., 1951
Uitto, Veli-Jukka, 201
Urakami, Hiroshi, 2290
Urisu, Atsuo, 916

Valent, Michal, 1037
Valone, Frank H., 1743
van Alphen, Loek, 2355
van Asbeck, B. S., 3197
van Asbeck, B. Sweder, 1447
VandenBosch, James L., 2645
van den Bosch, Johannes F., 2204
Vandenbroucke-Grauls, Christina M. J. E., 1447, 1455, 3197
van der Mei, Henny C., 438
Vande Waa, John A., 1722
van de Wee-Pals, J. J. A., 2110
Van Die, Irma, 1940
Van Dyke, Thomas E., 2262
van Embden, Jan D. A., 1466, 1932
van Kessel, Kok P. M., 1447
Vann, J. M., 2155
Van Vooren, Jean-Paul, 245
Vedros, Neylan A., 174
Veit, Hugo P., 217
Veit, Sandra P., 217
Verhoef, Jan, 1447, 1455, 3197
Victor, Michael, 2142
Vildé, Jean-Louis, 2234
Vinal, Andrew C., 1329
Vishniac, Helen S., 1751
Voravuthikunchai, Supayang Piyawan, 995
Vray, Bernard, 2496
Vu, An Cong, 1830

Wachsmuth, Kaye I., 3117
Wachtel, John S., 1635
Wada, Masaaki, 335
Wadee, Ahmed A., 2777
Waechter, M. J., 1686
Wakano, Yoichi, 420
Waldmann, Hermann, 2037
Walker, David H., 7, 1252
Walker, John A., 1184, 3228
Walker, Leslie E., 1680
Walker, Richard I., 1431
Walker, W. Allan, 3126
Waltisbuhl, D. J., 364
Wan, K. C., 211
Wang, Guo-Zhi, 1862
Wang, Jeff, 1867
Wang, Jia G., 7
Wanger, Audrey R., 1170
Wanke, Christine A., 1924, 2526
Ward, Joel I., 843, 3030
Ware, Patricia L., 778
Warren, H. S., 1668
Washburn, Ronald G., 2088
Watanabe, Tsuguo, 263
Watanabe, Yoshitsugu, 2300
Waters, Lesley S., 877
Watkins, Nancy G., 2570
Watson, H. L., 2838
Weavers, Edward D., 3103

Weckx, Maurice, 245
Weeks, Claudia R., 837
Weerkamp, Anton H., 438
Weiser, Jeffrey N., 2314
Weiss, Ervin I., 1198
Weiss, Jerrold, 2142
Welch, Rodney A., 2183
Wells, Carol L., 2689, 2834
Wess, Joann A., 1085
West, E. P., 2171
Whelan, William L., 1490, 3207
Whipp, Shannon C., 2057
White, Virginia K., 269
Whiteman, Leslie Y., 2442
Whittam, Thomas S., 1503
Wicher, Konrad, 2502
Wicher, Victoria, 2502
Wickes, Brian L., 1751, 3207
Widders, Phillip R., 1381, 1403
Widen, Raymond, 1369
Wiker, Harald G., 245
Wilder, Ronald L., 674
Wilkins, Tracy D., 118, 1873
Will, James A., 2471
Williams, Dwight M., 223, 2387
Williams, Glynne D., 1792
Williams, Peter H., 393, 1734
Williams, Robert P., 3017
Wills, Josephine M., 2653
Wilson, Mark E., 1029
Wilson-Burrows, Carolyn, 2262
Winestock, Jennifer, 1339
Wing, Edward J., 1843
Winkler, Herbert H., 240, 2032
Winkler, J. R., 2721
Wirth, Julia J., 2461
Wirtz, R., 1498
Wise, Kim S., 1094
Wittenberger, Charles L., 352
Wood, Patricia H., 1476
Woodin, Kathleen A., 2977
Woodmansee, Douglas, 2436, 2669
Woods, Donald E., 579
Woods, Jon P., 1927
Worsaae, Anne, 2922
Wright, I. G., 364
Wu-Hsieh, Betty A., 1014
Wyler, David J., 3188
Wyrick, Priscilla B., , 2255, 2420

Yagawa, Katsuro, 1279
Yamada, Akira, 3078
Yamada, Tadashi, 652, 698
Yamamoto, Ayako, 3001
Yamamoto, Koichiro, 1090
Yamamoto, Michiharu, 57
Yamamoto, Tetsuro, 2509
Yamamoto, Yoshimasa, 1369
Yamasaki, Ryohei, 1792
Yamashita, Tatsuhisa, 1762
Yanagihara, Yasutake, 2287
Yánoška, Andrej, 1037
Yarnall, David P., 16
Yasukawa, Masaki, 2490
Yeni, Patrick, 742, 749
Yoder, Mervin C., 1715
Yogev, Ram, 1944
Yokomizo, Yuichi, 711
Yokota, Takeshi, 2715
Yoshida, Shin-ichi, 2477
Young, Charles R., 1116
Young, Douglas B., 1421, 2860
Young, Richard A., 1000, 1421, 1932, 2223, 2378
Young, Ry, 2348
Youssef, Mohammad, 1019
Yu, David T. Y., 721
Yuan, Leo F., 604
Yuan, Ling, 1970
Yugi, Hiroyuki, 711
Yukitake, Jun, 2121

Zambon, Joseph J., 1029, 2320, 2534
Zane, Sandra F., 269
Zanen, H. C., 2355
Zeitz, Martin, 1137
Zepeda, Hector H., 118
Zhang, Jia Ming, 916
Zhang, You-Xun, 2570
Ziegler, H. Kirk, 1346
Zlotnick, Gary W., 2878
Zollinger, Wendell D., 1503
Zucker-Reimann, Joachim, 104
Zurbrick, Brenda G., 1588

SUBJECT INDEX

VOLUME 55

Abdominal-writhing response
  N-acetylmuramyl-L-alanyl-D-isoglutamine, 494
  analgesic effects, 494
Abortion
  antigens, 1381
  H. somnus, 1381
  serological characterization, 1381
Acetoin
  lactate dehydrogenase, 1399
  production, 1399
  S. mutans, 1399
Acetylation
  arthropathic activity, 16
  group A streptococci, 16
  peptidoglycans, 16
  polysaccharides, 16
N-Acetylgalactosamine
  E. histolytica, 2327
  lectins, 2327
N-Acetylglucosaminidase
  granules, 2579
  N. gonorrhoeae, 2579
  neutrophils, 2579
  peptidoglycans, 2579
N-Acetylmuramyl-L-alanyl-D-isoglutamine
  abdominal-writhing response, 494
  analgesic effects, 494
Acinetobacter calcoaceticus
  defensins, 1365
  granules, 1365, 2296
  neutrophils, 1365
  outer membranes, 2296
  polymorphonuclear leukocytes, 2296
Actin
  C. albicans, 2324
  C. difficile, 1610
  E. histolytica, 1848
  lipids, 1848
  membranes, 1848
  phagocytosis, 1848
  proteins, 2324
  toxin B, 1610
Actinobacillus actinomycetemcomitans
  anaerobiosis, 2320
  bacteriocin, 686, 692
  periodontitis, 686, 692
  proteins, 2320
Actinomyces naeslundii
  binding, 487
  glycosphingolipids, 487
Actinomyces spp.
  coaggregation, 2695
  mutans streptococci, 2695
Actinomyces viscosus
  binding assay, 2391
  cohesive interaction, 2391
  levanase
    characterization, 3001
    purification, 3001
Actins
  HeLa cells, 2681
  phagocytosis, 2681
  polymerization, 2681
  S. flexneri, 2681
Acylation
  lipid A
    activity, 57
    characterization, 57
Adenylate cyclase
  ADP ribosylation, 1854
  E. coli, 1854
  enterotoxins, 1854
  fibroblasts, 1854
Adherence
  A. salmonicida, 704
  adhesins, 393
  alpha-glycosides, 472
  antibodies, 1431
  antigens, 455, 2754
  B. gingivalis, 111, 1484
  C. jejuni, 1431
  capsules, 2308
  cilia, 1523
  colonocytes, 393
  crevicular fluid, 1484
  E. coli, 69, 78, 86, 123, 393, 455, 472, 2103, 2370
  electrophoresis, 704
  enteritis, 393
  enterocytes, 3044
  enterotoxins, 86
  enzymes, 1484
  epidermal cells, 1774
  epithelial cells, 455, 472, 839, 1523, 2103, 2308, 3057
  erythrocytes, 2754
  extracellular vesicles, 111
  fibronectin, 2103
  fimbriae, 86, 123, 455, 472
  genetic characterization, 123
  group B streptococci, 3057
  H. influenzae type b, 2308
  hemagglutination, 2093
  HEp-2 cells, 78
  hydrophobicity, 438
  intestines, 1431, 3044
    enterocytes, 69
    mucosa, 69, 86
  lipoteichoic acid, 839, 3057
  mannose, 472
  melanomas, 2754
  mucus, 1431
  oral microorganisms, 2721
  P. aeruginosa, 1523, 1774
  P. falciparum, 2754
  pellicle, 1552
  pili, 1774
  plasmids, 78, 455, 2370
  proteins, 2721
  S. salivarius, 438
  S. sanguis, 123, 1484, 1552
  S. saprophyticus, 839
  S. typhimurium, 3044
  saliva, 2103
  sialic acid, 1552
  surface fibrils, 438
  V. cholerae, 2093
  yeast cells, 472
Adhesins
  adherence, 393
  cloning, 3168
  colonocytes, 393
  cytadhesin P1 gene, 3023
  E. coli, 393, 1837, 1940, 3168
  enteritis, 393
  fimbriae, 1940
  M. genitalium protein, 49
  M. pneumoniae, 3023
  M. pneumoniae protein P1, 49
  mannose resistance, 1837
  P. aeruginosa, 600
  sfa gene, 1940
  tracheobronchial mucin, 600
Adoptive transfer
  colony-stimulating factors, 1843
  L. monocytogenes, 1843
  macrophages, 1843
  T cells, 2502
  T. pallidum, 2502
ADP ribosylation
  adenylate cyclase, 1854
  E. coli, 1854
  enterotoxins, 1854
  fibroblasts, 1854
Aerobactin
  E. coli, 193
  genetic characterization, 193, 1963
  mutants, 1963
  production, 1963
  S. flexneri, 1963
Aerolysin
  A. hydrophila, 2274
  marker exchange mutagenesis, 2274
Aeromonas salmonicida
  adherence, 704
  electrophoresis, 704
Aeromonas hydrophila
  aerolysin, 2274
  erythrocytes, 1594
  genetic characterization, 2274
  hemolysins, 1594
  marker exchange mutagenesis, 2274
Aeromonas spp.
  autoagglutination, 3070
  mesophilic aeromonads, 3070
  peripheral cells, 3070
  virulence markers, 3070
Aerosol challenge
  E. coli, 2293
  immune response, 1862
  lactoferrin, 2293
  M. tuberculosis, 1862
  polymorphonuclear leukocytes, 2293
Aerotolerance
  glucose-limited growth, 169
  S. mutans, 169
Affinity electrophoresis
  glucans, 3011
  proteins, 3011
  S. sobrinus, 3011
Agglutinins
  S. mutans, 1264
  saliva, 1264
  sialoglycoprotein complex, 1264
Alginate
  binding, 1517
  epithelial cells, 1517
  hypochlorite scavenging, 1806
  P. aeruginosa, 1517, 1806
Allele replacement
  mutants, 3103
  S. aureus, 3103
Alpha-glycosides
  adherence, 472
  E. coli, 472
  fimbriae, 472
  mannose, 472
Alpha-hemolysin
  E. coli, 3233
  leukotoxin, 3233
  P. haemolytica, 3233
Alpha-toxin

binding, 2940
erythrocytes, 2940
monoclonal antibodies, 2933
oligomerization, 2940
quantitation, 2933
S. aureus, 1906
toxin fragment, 1906
Amino acids
cysteine, 2121
mutagenesis, 2121
substitution, 2121
Anaerobes
intestines, 2689
translocation, 2689
Anaerobiosis
A. actinomycetemcomitans, 2320
proteins, 2320
Anaphylactoid reactions
endotoxins, 409
lipopolysaccharides, 409
muramyl dipeptide, 409
Anaphylaxis
antigens, 1004
pertussigen, 1004
pertussis toxin, 1004
Anaplasma marginale
genetic characterization, 2428
proteins, 2428
Anthrax
B. anthracis, 1859
vectors, 1859
Antibodies
adherence, 1431
anticapsular antibody, 2830
anticryptococcal antibody, 742, 749
antigens, 93, 731, 832, 1017, 1375
B cells, 990
B. gingivalis, 832
brain cysts, 990
C. jejuni, 1431
C. neoformans, 742, 749
C. trachomatis, 93
caries, 2341
cell injury, 507
complement, 507, 2830
conjunctivitis, 93
cross-reactivity, 1042
cystitis, 1951
E. coli, 1042, 1239
endocarditis, 3030
epitopes, 1000
group B streptococci, 1243
H. influenzae, 2878
H. influenzae type b, 2612, 2830
immunization, 2341
induction, 1498
intestines, 1431
intracellular killing, 1243
iron metabolism, 1239
lipid A, 2636
lipopolysaccharides, 507
lipoproteins, 2878
M. leprae, 1000
M. pneumoniae, 1830
M. pulmonis, 731
M. salivarium, 263
malaria, 891
merozoite phagocytosis, 888
mucus, 1431
outer membrane proteins, 1239
P. falciparum, 888
passive immunization, 1239
peptidoglycans, 2878
periodontitis, 832
peripheral blood cells, 507
phagocytosis, 1243
polysaccharides, 1375
proteins, 1000
response
local, 1951
systemic, 1951
S. aureus, 3030
S. mutans, 2341
septicemia, 1239
spleen, 1375
T cells, 990
T. gondii, 990, 1017
vaccines, 1498
Anticapsular antibody
complement, 2830
H. influenzae type b, 2830
Antigens
abortion, 1381
adherence, 86, 123, 455
analysis, 1626
anaphylaxis, 1004
antibodies, 93, 731, 832, 1017, 1375
antigen H.8, 1190
antigenic mimicry
M. hyorhinis, 1680
polypeptide, 1680
B. gingivalis, 832
Bacteroides spp., 631
beta antigen
binding, 1151
immunoglobulins, 1151
bovine mastitis, 1170
C. albicans, 616
C. botulinum, 3051
C. immitis, 227, 657, 2590
C. neoformans, 1657
C. parvum, 2436
C. pyloridis, 1256
C. trachomatis, 93, 482, 1324
Campylobacter spp., 828
Capnocytophaga spp., 631
cell walls, 674
cloning, 2844
coccidioidin, 2590
colicin Ia, 1929
collagenase, 2148
colonization factor, 86
conjunctivitis, 93
cross-reactivity, 2977
M. genitalium, 49
M. pneumoniae, 49
delayed-type hypersensitivity, 822
3-deoxy-D-*manno*-octulosonate, 462
DNA library, 1421
E. coli, 86, 123, 455, 555, 1929, 2052
E. saburreum, 871
encephalopathy, 1004
enterotoxins, 1929
enzymes, 631
epithelial cells, 455
epitopes, 49, 462, 482, 810, 1412, 2977
F antigen, 227
F. nucleatum, 771
fibroblasts, 2148
fimbriae, 123, 455
flagellins, 828
genetic characterization, 123, 1156, 1421, 2378
germ tubes, 616
gingivae, 2148
granulomas, 674
group B streptococci, 1151
H. influenzae, 882
H. influenzae type b, 2977
H. pleuropneumoniae, 1626
H. somnus, 1381
Ia, 674
Ibc protein genes, 1151
immune response, 403, 1346
immunoaffinity chromatography, 227
immunogens, 482
immunoglobulins, 631, 1830
immunogold staining, 1324
immunological activity, 3149
interleukins, 403
intestines, 828
L. mexicana subsp. *amazonensis*, 3142
leprosy, 1932
lesions, 3142
lipoarabinomannans, 762
lipooligosaccharides, 882
lipopolysaccharides, 462, 482, 1346, 1412, 2844
M. bovis BCG, 245, 1932, 3213
M. leprae, 1421
M. paratuberculosis, 762
M. pneumoniae, 1830
M. pulmonis, 731, 1314
M. tuberculosis, 1421, 2922, 3149
macrophages, 1346
malaria, 2604
mannoproteins, 616
membranes, 1314
monoclonal antibodies, 7, 266, 462, 604, 771, 810, 1324, 2604, 2759
mutans streptococci, 2759
Mycobacterium spp., 2378
N. gonorrhoeae, 1190, 2844
neurotoxin, 3051
nucleoside triphosphate hydrolase, 1332
O antigens, 1412, 2052
oocysts, 2436
oral microorganisms, 266, 771
outer membrane proteins, 816, 822
P. falciparum, 1387
P. vivax, 2604
P. yoelii, 604
parasites, 403
periodontitis, 832, 2148
pertussigen, 1004
pertussis toxin, 1004
pili, 555
plasmids, 455, 1929, 2052
polymorphism, 2604
polypeptides, 1387
polysaccharides, 871, 1375, 3006
porin, 822
prostaglandins, 2148
protease, 631
protection, 816
proteins, 245, 1830, 2137, 2759, 3213
putative colonization factor, 1929
R. conorii, 7
R. tsutsugamushi, 1156
reactivity
allergenic, 2922
blastogenic, 2922
S. agalactiae, 1170
S. dysenteriae, 1412
S. flexneri, 1412
S. mansoni, 1163
S. minnesota, 482
S. mutans, 810, 3006
S. sanguis, 123

S. typhi, 822
S. typhimurium, 482, 816, 822
serological characterization, 1381
spherulin, 2590
spleen, 1375
sporozoites, 604
streptococci, 674
Streptococcus spp., 266
surface antigens, 1314, 1324
T cells, 7, 1163, 1657, 2625
T. cruzi, 403
T. gondii, 778, 1017, 1332, 2137
tuberculosis, 1932
vaccines, 555
Antipyretic activity
fever model, 547
immunoglobulins, 547
Antiserum
E. coli J5, 1668
endotoxin neutralization, 1668
gram-negative bacteria, 1668
Arabinomannans
antigens, 762
M. paratuberculosis, 762
Arthritis
experimental animal model, 721
Y. enterocolitica, 721
Arthropathic activity
acetylation, 16
group A streptococci, 16
peptidoglycans, 16
polysaccharides, 16
Aspergillus fumigatus
myeloperoxidase, 2088
oxidative killing, 2088
Atelectasis
intrapulmonary growth, 2747
S. aureus, 2747
ATPases
fluoride, 2597
oral microorganisms, 2597
Atrophic rhinitis
B. bronchiseptica, 217
toxins, 217
Attachment
matrix, 2721
membranes, 2721
oral microorganisms, 2721
proteins, 2721
Autoagglutination
Aeromonas spp., 3070
mesophilic aeromonads, 3070
peripheral cells, 3070
virulence markers, 3070
Auxotropny
S. typhi, 892
teaching strain, 892

B cells
activation, 3162
antibodies, 990
brain cysts, 990
C. trachomatis, 2387
deficiency, 2387
pneumonia, 2387
spleen, 3162
T cells, 990
T. gambiense, 3162
T. gondii, 990
Babesia bigemina
B. bovis, 364
cross-protection, 364
Babesia bovis
B. bigemina, 364
cross-protection, 364
Bacillus anthracis
transmission
mosquitoes, 1859
stable flies, 1859
Bacillus thuringiensis subsp. *israelensis*
cell membranes, 1300
cytolysis, 1300
toxins, 1300
Bacteremia
erythrophagocytosis, 2074
Kupffer cells, 2074
Bacteriocin
A. actinomycetemcomitans, 686, 692
oral microorganisms, 686, 692
periodontitis, 686
Bacteroides fragilis
chemotaxis, 1725
neutrophils, 1725
peptidoglycans, 1725
Bacteroides gingivalis
adherence, 111, 1484
antibodies, 832
antigens, 832
binding assay, 2391
cohesive interaction, 2391
crevicular fluid, 1484
enzymes, 1484
extracellular vesicles, 111
fibroblasts, 201
glycylprolyl protease, 3131
immunization, 2534
membranes, 3131
mouse model, 2534
periodontitis, 111, 832
protease
characterization, 420, 716
isolation, 716
purification, 420
virulence, 201
Bacteroides spp.
antigens, 631
immunoglobulins, 631
intracellular pH, 864
neutrophil respiratory burst, 864
protease, 631
succinic acid, 864
Bacteroides vulgatus
colitis, 835
immune response, 835
Basophils
activation mechanism, 803
histamine, 803
S. aureus Cowan 1, 803
Beta-hemolysin
group B streptococci, 2314
transposon mutagenesis, 2314
Binding
A. actinomycetemcomitans, 1029
A. naeslundii, 487
alpha-toxin, 2940
chemical characterization, 141
cholera toxin, 3126
Congo red, 1393
E. coli, 1216, 1878
erythrocytes, 2940
glycosphingolipids, 487
granules, 1536
HeLa cells, 1393
hemin, 1393
intestinal mucins, 1216
intestines, 3126
kinetics, 3126
membranes, 2940
microvillus membranes, 3126
myeloperoxidase, 1029
N. gonorrhoeae, 141
neutrophils, 1029, 1536
pili, 1216
proteins, 1536
protein II, 141
protein S (vitronectin), 1878
S. aureus, 1878, 2940
S. flexneri, 1393
Streptococcus spp., 1878
Binding assay
cohesive interaction
A. viscosus, 2391
B. gingivalis, 2391
Bioactivity
fetuin-agarose, 1294
pertussis toxin, 1294
Blastogenesis
H. capsulatum, 937
lymphocytes, 937
mitogens, 937
Blastomyces dermatitidis
fungicidal activity, 3221
macrophages, 3221
Blastospores
antigens, 616
C. albicans, 616
germ tubes, 616
mannoproteins, 616
Blood
antibodies, 507
cell injury, 507
complement, 507
lipopolysaccharides, 507
Bone resorption
stimulation
inflamed mucosa, 2110
P. multocida, 2110
toxins, 2110
Bordetella bronchiseptica
atrophic rhinitis, 217
B. parapertussis, 497
genetic characterization, 497
glycoconjugates, 1607
mucosae, 1607
pertussis toxin, 497
pneumonia, 217
receptors, 1607
toxins, 217
Bordetella parapertussis
B. bronchiseptica, 497
genetic characterization, 497
pertussis toxin, 497
Bordetella pertussis
adenylate cyclase
characterization, 135
isolation, 129
purification, 129
cloning, 154
E. coli, 154
fimbriae
serotype 2, 916
serotype 6, 916
hemagglutinin, 154
peptidoglycans, 2117
pertussis toxin
B oligomer, 1132
immune response, 1132
polymorphonuclear leukocytes, 135

subunits, 1309
toxin mutants
characterization, 2465
construction, 2465
tracheal cytotoxin, 2117
Borrelia burgdorferi
lipopolysaccharides, 2311
Lyme disease, 2311
Botulinum toxin
activation, 1461
trypsin, 1461
Bovine mastitis
protein antigen, 1170
S. agalactiae, 1170
Brain cysts
antibodies, 990
B cells, 990
T cells, 990
T. gondii, 990
Bronchoalveolar lavage
immune response, 2132
T. canis, 2132
Brucella abortus
antigens, 258
E. coli, 258
mutagenesis, 2774
outer membrane proteins, 258
transposons, 2774
Brucella melitensis
fragment release, 609
haptens, 2850
outer membrane, 609
polysaccharides, 2850
Bursectomy
cell-mediated immunity, 1616
coccidiosis, 1616
cyclosporin A, 1616

Calcium
C. albicans hyphae, 2783
free calcium distribution, 1784
neutrophils, 1784, 2783
superoxide production, 1784
Calmodulin-Sepharose 4B chromatography
adenylate cyclase
isolation, 129
purification, 129
B. pertussis, 129
Campylobacter jejuni
adherence, 1431
antibodies, 1431
coinfection, 2816, 2816
cytotoxin, 2526
diarrhea, 2526
enteritis, 2816, 2816
ileitis, 2240
intestines, 1431
invasiveness, 2816, 2816
lipopolysaccharides
properties, 1806
structure, 1806
monoclonal antibodies, 2240
mucus, 1431
Campylobacter pylori
gastritis, 2789
stomach, 2789
Campylobacter pyloridis
antigens
composition, 1256
diversity, 1256
Campylobacter spp.
antigens, 828
E. coli, 1019
electrophoresis, 1564
flagellins, 828
immunoblotting, 1564
intestines, 828, 1019
outer membrane proteins, 1564
translocation, 1019
Candida albicans
actin, 2324
antibodies, 2619
antigens, 616
blastospores, 616
calcium, 2783
cell wall glycoprotein, 2619
colonization, 1558
complement
activation, 1890
binding, 1890
dissemination, 1558
gastrointestinal tract, 1558
germ tubes, 616
hyphae, 2783
macrophages, 1663
mannoproteins, 616
neutrophils, 2783
phagosome-lysosome fusion, 1663
proteins, 2324
Candida spp.
bronchoalveolar lavage fluid, 541
candidacidal factors, 541
DNA synthesis, 1490
flow cytometry, 1490
lungs, 541
Candida stellatoidea
DNA content, 3207
ploidy, 3207
Candidacidal activity
bronchoalveolar lavage fluid, 541
Candida spp., 541
Capnocytophaga ochracea
coaggregation, 1198
lectinlike surface components, 1198
oral microorganisms, 1198
Capnocytophaga spp.
antigens, 631
immunoglobulins, 631
protease, 631
Caprine pleuropneumonia
monoclonal antibodies, 3219
mycoplasmas, 3219
Capsular polymer
H. pleuropneumoniae
characterization, 1573, 1580
purification, 1573, 1580
serotype specificity, 1580
Capsular polysaccharide
C. neoformans, 742
monoclonal antibodies, 742
Capsules
adherence, 2308
C. neoformans, 1895
E. coli, 2662
epithelial cells, 2308
H. influenzae type b, 2308
monoclonal antibodies, 1895
mucoid, 2191
polysaccharides, 1819, 2662
characterization, 2191
immunogenicity, 2191
S. aureus, 2191
S. pneumoniae, 1819
virulence, 2662
Carbohydrates
lipoarabinomannan, 2857
M. leprae, 2857
monoclonal antibodies, 2857
Cardiomyopathy
Chagas' disease, 3188
fibroblast-stimulating factor, 3188
mesenchymal cells, 3188
T. cruzi, 3188
Caries
antibodies, 2341
protection, 2341
S. mutans, 2341
Cecectomy
colonization resistance, 995
intestines, 995
S. enteritidis, 995
Cefoxitin
C. difficile, 198
diarrhea, 198
Cell membranes
B. thuringiensis subsp. *israelensis*, 1300
cytolysis, 1300
toxins, 1300
Cell surface
neutrophil chemotaxis, 2262
periodontitis, 2262
proteins, 2262
T. pallidum, 2255
Cell surface morphology
adherence, 438
hydrophobicity, 438
S. salivarius, 438
Cell walls
antigens, 674
C. albicans, 2619
glycoprotein, 2619
granulomas, 674
group A streptococci, 1526
streptococci, 674
Cell-mediated immunity
coccidiosis
bursectomy, 1616
cyclosporin A, 1616
Cell-to-cell interaction
hydroxyapatite, 1441
P. acnes, 1441
S. sanguis, 1441
saliva, 1441
Cellulase
female genital tract, 414
toxic shock syndrome, 414
Centipeda periodontii
immunosuppression, 2332
selective cytotoxicity
lymphocytes, 2332
monocytes, 2332
Cerebrosides
C. botulinum, 3051
neurotoxin, 3051
Chagas' disease
cardiomyopathy, 3188
fibroblast-stimulating factor, 3188
mesenchymal cells, 3188
T. cruzi, 3188
Chamber implant model
P. aeruginosa
colonial dissociation, 2841
phagocytosis, 2841
Chemiluminescence
granulocytes, 758
lipopolysaccharides, 758
M. bovis BCG, 1476
macrophages, 1476

oxidative response, 2398
S. aureus, 2398
vaccines, 1476
Chemotaxis
B. fragilis, 1725
neutrophils, 1725, 2262
peptidoglycans, 1725
periodontitis, 2262
proteins, 2262
Chlamydia psittaci
vaccines, 2653
Chlamydia spp.
granules, 2420
polymorphonuclear leukocytes, 2420
proteins, 242
Chlamydia trachomatis
antibodies, 93
antigens, 93
B cells, 2387
conjunctivitis, 93
epitopes, 2570
genital infection, 1767
humoral immune response, 1767
immunogold staining, 1324
interferon, 2727
intestines, 1137
lymphocytes, 1137
monoclonal antibodies, 1324
natural killer cells, 223
outer membrane proteins, 2570
biosynthesis, 162
disulfide cross-linking, 162
pneumonia, 2387
pneumonitis agent, 223
proctitis, 1137
surface antigens, 1324
Chlamydial infections
estradiol, 2317
mucosal antibody, 2317
CHO cells
pertussis toxin
A subunit, 24
morphology, 24
Cholera
subunit B, 1116
V. cholerae, 1116
vaccines, 1116
Cholera toxin
binding, 3126
immune response, 1997
intestines, 1997, 3126
microvillus membranes, 3126
operon transcription, 1529
Peyer's patch, 1997
V. cholerae
mutant, 1529
wild type, 1529
Cholesterol
metabolism, 309
T. hyodysenteriae, 309
Cilia
adherence, 1523
epithelial cells, 1523
P. aeruginosa, 1523
Circumsporozoites
oocysts, 2928
P. ovale, 2928
proteins, 2928
Citrate synthase
C. burnetii, 848
E. coli, 848
genetic characterization, 848
Clonal diversity
genetic characterization, 1207
H. pleuropneumoniae, 1207
Clones
M. tuberculosis, 2223
T cells, 2223
Cloning
adherence, 123
adhesins, 3168
B. pertussis, 154
E. coli, 123, 154, 2675, 3168
Fc receptor protein gene, 1233
filamentous hemagglutinin, 154
fimbria gene, 123
genetic characterization, 1503
group A streptococci, 1233
lipopolysaccharide antigen, 2844
N. gonorrhoeae, 2844
N. meningitidis, 1503
S. sanguis, 123
Shiga-like toxin, 2675
Clostridium botulinum
neurotoxin, 3051
toxin
activation, 1461
trypsin, 1461
Clostridium chauvoei
flagella, 1779
monoclonal antibodies, 1779
Clostridium difficile
actin, 1610
antimicrobial agent, 198
C. sordellii, 35
cefoxitin, 198
colonization resistance, 1686
cross-reactivity, 35
cytotoxins, 35
diarrhea, 198
diet effects, 1801
ileocecitis, 2984
immunization, 2984
phagocytosis, 1541
polymorphonuclear leukocytes, 1541
prairie dog model, 198
protection, 2984
thyroglobulins, 1873
toxin A, 1873
toxin B, 1610
toxin production, 1801
volatile fatty acids, 1686
Clostridium perfringens
characterization, 118
enterotoxin fragment
function, 2912
isolation, 2912
iota toxin, 118
Clostridium sordellii
C. difficile, 35
toxin
characterization, 35
purification, 35
Coaggregation
mutans streptococci, 2695
oral actinomyces, 2695
Coccidioides immitis
antigenic identity
coccidioidin, 2590
spherulin, 2590
antigens, 227, 657
characterization, 657
conidial wall fraction, 657
immunoaffinity chromatography, 227
interferons, 2951
lymphocytes, 1058
macrophages, 2951
proteinase
characterization, 1970
isolation, 1970
transformation response suppression, 1058
Coccidiosis
bursectomy, 1616
cyclosporin A, 1616
immune response, 1616
Cohesion
A. viscosus, 2391
B. gingivalis, 2391
Coinfection
C. jejuni, 2816
enteritis, 2816
Colicin Ia
antigens, 1929
E. coli, 1929
plasmids, 1929
Colicin V
adherence, 2483
E. coli, 2483
genetic characterization, 2483
plasmids, 2483
Colitis
B. vulgatus, 835
immune response, 835
Colonial dissociation
chamber implant model, 2841
P. aeruginosa, 2841
Colonization factor
enterotoxigenic *E. coli*, 1063
new fimbrial factor
genetics, 1063
morphology, 1063
purification, 1063
Colonization resistance
C. difficile, 1686
volatile fatty acids, 1686
Colonocytes
adherence, 393
adhesins, 393
E. coli, 393
enteritis, 393
Colony-stimulating factors
adoptive transfer, 1843
granulocytes, 2715
L. monocytogenes, 1843
macrophages, 1843
protection, 2715
Complement
activation, 174, 2066
antibodies, 507
anticapsular antibody, 2830
C. albicans, 1890
C3, 358
activation, 1890
binding, 1890
C3 synthesis stimulation, 1101
C5a, 1867
cell injury, 507
classical pathway, 2645
E. coli, 206
effector cells, 358
epitopes, 1867
group B streptococci, 1101, 1243
H. influenzae type b, 2830
intracellular killing, 1243
K. pneumoniae, 2741
lipopolysaccharides, 507
lysis, 2442
macrophagelike cells, 1101

monoclonal antibodies, 1867
N. meningitidis, 174
Naegleria spp., 2442
peripheral blood cells, 507
phagocytosis, 1243
plasmids, 2645
pore formation, 206
resistance, 358
S. typhimurium, 2645
sialic acid, 174
susceptibility, 2741
T. lewisi, 358
T. pallidum subsp. *pallidum*, 2066
T. vincentii, 2066
Congo red
binding, 1393
HeLa cells, 1393
hemin, 1393
S. flexneri, 1393
Conjugal transfer
colicin V, 2483
E. coli, 2483
plasmids, 2483
Conjunctivitis
antibodies, 93
antigens, 93
C. psittaci, 2653
C. trachomatis, 93
vaccines, 2653
Coxiella burnetii
citrate synthase gene
cloning, 848
expression, 848
E. coli, 848
flow cytometry, 1731
L929 cells, 1731
lipopolysaccharides, 1144
virulence, 1144
Crevicular fluid
adherence, 1484
B. gingivalis, 1484
enzymes, 1484
hydroxyapatite, 1484
S. sanguis, 1484
Crisis forms
P. falciparum, 1722
tumor necrosis factor, 1722
Cross-genus reactivity
lipid A specificity, 899
lipopolysaccharides, 899
monoclonal antibodies, 899
Cross-protection
B. bigemina, 364
B. bovis, 364
Cross-reactivity
antigens, 2977
epitopes, 2977
H. influenzae type b, 2977
Cryptococcus neoformans
antigens, 1657
capsular polysaccharides, 742, 1895
colonization, 2000
immune response, 749
immunologic tolerance, 233
lymphokines, 233
macrophages, 233
monoclonal antibodies, 742, 749
characterization, 1895
production, 1895
pathogenesis, 2000
protection, 749
T cells, 1657
urease
EDTA, 1751
inhibition, 1751
Cryptosporidium parvum
antigens, 2436
oocysts, 2436
sporozoites
infectivity, 2081
neutralization, 2081
Cryptosporidium sp.
cyclophosphamide-rat model, 2669
intestines, 2669
Cyclophosphamide
colony-stimulating factor, 2715
Cryptosporidium sp., 2669
granulocytes, 2715
intestines, 2669
Cyclosporin A
bursectomy, 1616
cell-mediated immunity, 1616
coccidiosis, 1616
immunosuppression, 1701
M. bovis BCG, 1701
Cysteine
E. coli, 2121
enterotoxins, 2121
oligonucleotide-directed mutagenesis, 2121
Cystic fibrosis
P. aeruginosa, 2364
saliva-mediated aggregation, 2364
sialic acid, 2364
Cystitis
antibodies, 1951
Cytadhesin
M. pneumoniae, 3023
P1 gene
cloning, 3023
sequence analysis, 3023
Cytolysin
erythrocytes, 3209
phospholipase D, 3209
V. damsela, 3209
Cytolysis
B. thuringiensis subsp. *israelensis*, 1300
cell membranes, 1300
toxins, 1300
Cytotoxins
B. pertussis, 2117
C. jejuni, 2526
diarrhea, 2526
E. coli, 1824
peptidoglycans, 2117
Vero toxin, 1824

Defensins
A. calcoaceticus, 1365
antimicrobial activity, 2281
extracellular release, 568
granules, 1365
microbicidal activity, 1365
neutrophils, 1365
polymorphonuclear leukocytes, 568
purification, 2281
structure, 2281
Dehydrogenase
histoenzymology, 727
P. carinii, 727
Delayed hypersensitivity
L. monocytogenes, 3078
transfer of resistance, 3078
Delayed-type hypersensitivity
antigens, 822
cutaneous leishmaniasis, 645
immune response, 639
L. major, 645
L. monocytogenes, 639
Mycobacterium spp., 564
P. aeruginosa, 639
porin, 822
resistance, 564
S. typhi, 822
S. typhimurium, 822
suppression, 639
T-cell clones, 564
3-Deoxy-D-*manno*-octulonosate
antigens, 462
epitopes, 462
lipopolysaccharides, 462
monoclonal antibodies, 462
Dephosphorylation
E. coli, 974
lipid A, 974
lipopolysaccharides, 974
macrophages, 974
Dextranase
cloning, 792
complex
characterization, 792
purification, 792
genetic characterization, 792
S. sobrinus, 792
Diarrhea
C. difficile, 198
C. jejuni, 2526
cefoxitin, 198
colonization, 1924
cytotoxin, 2526
intestines, 1924
prairie dog model, 198
Diet
C. difficile, 1801
toxin production, 1801
Dihydroheptaprenol
E. coli, 2164
polyprenol, 2164
resistance enhancement, 2164
Diphtheria
E. coli, 1647
mutant toxin, 1647
DNA
antigens, 1421
C. stellatoidea, 3207
genetic characterization, 1421
M. gallisepticum, 2857
M. leprae, 1421
M. tuberculosis, 1421
Neisseria spp.
commensal, 1009
pathogenic, 1009
ploidy, 3207
probes, 2857
sequence distribution, 1009
synthesis
Candida spp., 1490
flow cytometry, 1490

EDTA
C. neoformans, 1751
urease inhibition, 1751
Ehrlichia risticii
immune response, 2215
lymphoid depletion, 2215
Eimeria bovis
lymphokines, 784

macrophages, 784
monocytes, 784
T. gondii, 784
El Tor-like hemolysin
enterotoxicity, 1090
V. cholerae non-O1, 1090
Elastase
natural killer cells, 986
P. aeruginosa, 986
Electrophoresis
Campylobacter spp., 1564
peptide mapping, 843
protein A, 843
proteins, 1564
S. aureus, 843
Western blot, 843
Electrostatic charges
A. salmonicida, 704
adherence, 704
Encephalopathy
anaphylaxis, 1004
antigens, 1004
pertussigen, 1004
pertussis toxin, 1004
Endocarditis
antibodies, 3030
S. aureus, 3030
Endothelial cells
injury, 1447
lipoxygenase, 1447
monolayer damage, 2155
opsonins, 1455
polymorphonuclear leukocytes, 1447, 1455
S. aureus, 1455, 2155
Endotoxemia
erythrophagocytosis, 2074
Kupffer cells, 2074
Endotoxins
anaphylactoid reactions, 409
antiserum
E. coli J5, 1668
gram-negative bacteria, 1668
enhanced effects, 1715
febrile response, 2574
fever
augmentation, 1121
interferons, 1121
hypersensitivity, 2230
hypertension, 2471
immunoprotection, 1927
interferons, 2574
interleukins, 2865
lethality, 409
lipid X, 2471
lipopolysaccharides, 409
macrophages, 2865
monoclonal antibodies, 1927
muramyl dipeptide, 409
N. meningitidis, 1927
neutralization, 1668
plasma fibronectin, 1715
potentiation, 2456
pyrogen tolerance, 2574
shock, 2456
streptococcal pyrogenic exotoxin, 2456
toxic shock syndrome toxin, 2865
tumor necrosis factor, 1622, 2230
uptake
Kupffer cells, 2962
peritoneal cells, 2962
Entamoeba histolytica
actin, 1848
lectin binding
N-acetylgalactosamine, 227
galactose, 2327
lipids, 1848
membranes, 1848
neuraminidase, 181
phagocytosis, 1848
Enteritis
adherence, 393
adhesins, 393
C. jejuni
coinfection, 2816
invasiveness, 2816
colonocytes, 393
E. coli, 393, 1734
fimbriae, 1734
Enterocolitis
delta-like toxin, 2268
staphylococci, 2268
Enterocytes
adherence, 3044
enterocytelike cells, 2822
intestines, 3044
L. monocytogenes
intracellular growth, 2822
penetration, 2822
S. typhimurium, 3044
Enterotoxins
antigens, 1929
B, 837
C. perfringens, 2912
C1, 428, 837
cysteine, 2121
E. coli, 428, 1077, 1329, 1929, 2057, 2121, 3111
association, 329
brush border membrane, 329
dissociation, 329
fimbriae, 3111
fluid accumulation, 626
fragment, 2912
genetic characterization, 428, 1329, 3111
immunogens, 1077
oligonucleotide-directed mutagenesis, 2121
plasmids, 1929
protease, 2057
S. aureus, 428, 837
V. hollisae, 626
variants, 3111
Enzymes
A. actinomycetemcomitans, 1029
A. fumigatus, 2088
A. viscosus, 3001
acetoin, 1399
N-acetylglucosaminidase, 2579
adenylate cyclase, 129, 135, 217, 1854
adherence, 1484
alkaline protease, 986
antigens, 631, 1332
B. bronchiseptica, 217
B. gingivalis, 716, 1484, 3131
B. gingivalis protease
characterization, 420
purification, 420
B. pertussis, 129, 135
Bacteroides spp., 631
C. burnetii, 848
C. immitis, 1970
C. neoformans, 1751
Capnocytophaga spp., 631
cellulase, 414
citrate synthase gene
cloning, 848
expression, 848
collagenase, 2148
crevicular fluid, 1484
dehydrogenase, 727
dextranase, 792
E. coli, 848
E. histolytica, 181
elastase, 986
exoenzyme S, 579
female genital tract, 414
fluoride, 2597
fructosyltransferase, 698
genetic characterization, 792
glucosyltransferase, 1900, 2176, 2562
glycylprolyl protease, 3131
H. influenzae (nontypable), 2585
hyaluronidase, 1023
immunization, 2562
immunoglobulin A1 protease, 931
immunoglobulins, 631
L. monocytogenes, 3197
β-lactamase, 2585
lactate dehydrogenase, 1399
levanase, 3001
lipoxygenase
endothelial cells, 1447
polymorphonuclear leukocytes, 1447
membranes, 3131
myeloperoxidase, 1029, 1047, 2088
N. fowleri, 1047
N. gonorrhoeae, 931, 2579
natural killer cells, 986
neuraminidase, 1, 181
neutrophils, 1029
nucleoside triphosphate hydrolase, 1332
oral microorganisms, 698, 2597
ornithine decarboxylase, 2461
oxidative agents, 3197
P. aeruginosa, 579, 986, 1728, 2509
P. carinii, 727
phospholipase C, 1728
phospholipase D, 3209
protease, 420, 451, 631, 1936, 2057
characterization, 716
isolation, 716
proteases, 2509, 3131
proteinase, 1970
proton-translocating ATPases, 2597
purification, 579
pyruvate formate-lyase, 652
S. marcescens, 2509
S. mutans, 652, 1399
S. salivarius, 698
S. sanguis, 652, 1484
S. sobrinus, 792, 2562
streptococci, 1
sugar metabolism, 652
syphilis, 1023
T. cruzi, 2461
T. gondii, 1332
T. pallidum, 1023
toxic shock syndrome, 414
urease, 2198
EDTA, 1751
inhibition, 1751
urinary tract, 2198
V. cholerae, 451
Eosinophils
malaria, 877
P. falciparum, 877
secretory products, 877
Epidermal cells

adherence, 1774
P. aeruginosa, 1774
pili, 1774
Epithelial cells
adherence, 455, 472, 839, 1523, 2103, 2308, 3057
alginate, 1517
alveolar type II, 736
binding, 1517
capsules, 2308
cilia, 1523
E. coli 455, 472, 2103
fibronectin, 2103
fimbriae, 455
group B streptococci, 2878
H. influenzae, 2355
H. influenzae type b, 2308
lipoteichoic acid, 839, 3057
P. aeruginosa, 1517, 1523
P. carinii, 736
phospholipids, 736
receptors, 2355
S. dysenteriae, 1533
S. saprophyticus, 839
saliva, 2103
Shiga toxin, 1533
Epitopes
adhesins, 49
antibodies, 1000
antigens, 1412, 2977
C. trachomatis, 482, 2570
cell wall antigen, 810
complement, 1867
conservation, 513
cross-reactivity, 2977
3-deoxy-D-*manno*-octulonosate, 462
E. coli, 923
fimbriae, 923
genus specificity, 482
H. influenzae type b, 513, 2977
lipooligosaccharides, 1652, 1755
lipopolysaccharides, 462, 1412
M. genitalium protein, 49
M. leprae, 1000
M. pneumoniae protein, 49
malarial peptide, 2658
monoclonal antibodies, 462, 825, 923, 1412, 1867
N. gonorrhoeae, 1755
N. meningitidis, 1652
oligosaccharides, 513
outer membrane proteins, 2570
P. knowlesi, 2658
phenotypic variation, 1755
probes
polymer specific, 923
subunit specific, 923
proteins, 825, 1000
R. rickettsii, 825
recognition
carbohydrate, 810
protein, 810
S. dysenteriae, 1412
S. flexneri, 1412
S. mutans, 810
specificities, 462
T. vaginalis, 1037
tetanus toxoid, 2658
Erythrocytes
A. hydrophila, 1594
adherence, 2754
alpha-toxin, 2940
antimalarial polypeptides, 342
attachment, 187
binding, 2940
cytolysin, 3209
glycoproteins, 187
H. influenzae, 2355
hemolysins, 1594
Kupffer cells, 2074
lipids, 304
malaria, 342
membranes, 1594, 2940
P. chabaudi, 187
P. falciparum, 342, 2754
phagocytosis, 2074
phospholipase D, 3209
receptors, 2355
S. aureus, 2940
T. hyodysenteriae, 304
V. damsela, 3209
Escherichia coli
adenylate cyclase, 1854
adherence, 69, 78, 86, 123, 393, 455, 472, 2103, 2370
adhesins, 393, 1837, 1940, 3168
ADP ribosylation, 1854
aerobactin genes, 193
aerosol challenge, 2293
alpha-glycosides, 472
alpha-hemolysin, 3233
antibodies, 1042, 1239
antigenic determinants, 258
antigens, 455, 555, 1929, 2052
antiserum, 1042
B. abortus, 258
B. pertussis, 154
binding, 1216, 1878
Braun lipoprotein, 258
brush border membrane receptors, 329
C. burnetii, 848
Campylobacter spp., 1019
capsules, 2662
citrate synthase gene, 848
cloning, 154, 2993, 3168
colicin Ia, 1929
colonization factor, 86
colonocytes, 393
cross-reactivity, 1042
cysteine, 2121
digestion, 2142
dihydroheptaprenol, 2164
diphtheria, 1647
enhanced resistance to, 2164
enteritis, 393, 1734
enterotoxigenic *E. coli*, 1063, 1085, 1336
enterotoxigenic variants, 3111
enterotoxin genes, 1329
enterotoxins, 329, 428, 555, 1077, 1854, 1929, 2057, 2121, 3111
epithelial cells, 455, 2103
epitopes, 923
fibroblasts, 1854
fibronectin, 2103
fimbriae, 86, 455, 472, 923, 1734, 1940, 2204, 3111
fimbrial colonization factor, 1063
genetic characterization, 123, 1106, 1329, 1734, 2675, 2734, 2993
H. influenzae type b, 2993
hemagglutinin, 154
HEp-2 cells, 78
entry, 1674
replication, 1674
hypochlorous acid
inactivation, 2518
metabolism, 2518
immunogens, 1077
immunoglobulins, 1085
intestinal mucins, 1216
intestines, 1019, 2834
enterocytes, 69
mucosa, 69, 86
iron metabolism, 1239
lactoferrin, 2293
leukotoxin, 3233
lipid A dephosphorylation, 974
lipopolysaccharides, 974, 2052, 2706
M. bovis BCG, 1466
macrophages, 974
mannose, 472, 968
mannose resistance, 1837
membrane glycoproteins, 968
membrane protein antigen, 1106
mesenteric lymph nodes, 2834
monoclonal antibodies, 923
N. meningitidis, 2734
oligonucleotide-directed mutagenesis, 2121
outer membrane proteins, 258, 1239, 2734, 2993
oxidative metabolism, 534
pertussis toxin, 1321, 2546
Peyer's patches, 1085
pili, 534, 555, 1216
distribution, 293
P, 293
type 1, 293, 373
urinary tract, 373
plasmids, 78, 455, 1929, 2052, 2370, 3117
polymorphonuclear leukocytes, 534, 968, 2142, 2293
polyprenol, 2164
polysaccharides, 2662
protease, 2057
protein S, 1878
proteins, 1466
putative colonization factor, 1929
pyelonephritis, 2204
receptors, 968
respiratory burst, 2142
S. aureus, 428
S. sanguis, 123
S-1 catalytic subunit, 1321
saliva, 2103
septicemia, 1239
serological characterization, 1336, 2204, 2706
sfa gene, 1940
Shiga-like toxin, 2675, 3117
surface properties, 1824
survival, 2834
T. pallidum, 1106
tetanus toxin, 2541
toxins, 1647, 1824
translocation, 1019
Vero toxin, 1824
virulence, 2662
Estradiol
chlamydial infections, 2317
mucosal antibody, 2317
Eubacterium saburreum
antigens, 871
polysaccharides, 871
Eucaryotic cells
macrophages, 521
plasmids, 521
S. flexneri, 521
Exoenzyme S

P. aeruginosa, 579
purification, 579
Exotoxins
cross-reactivity, 837
endotoxin shock, 2456
S. pyogenes, 837
streptococcal pyrogenic exotoxin, 2456
type A, 837
Extracellular toxic complex
K. pneumoniae
characterization, 44
production, 44

Fatty acids
C. botulinum, 3051
C. difficile, 1680
colonization resistance, 1680
neurotoxin, 3051
Fc receptor
genetic characterization, 1233
group A streptococci, 1233
protein gene
cloning, 1233
expression, 1233
Febrile response
endotoxins, 2574
interferons, 2574
pyrogen tolerance, 2574
Ferripyochelin
P. aeruginosa, 2021
proteins, 2021
virulence, 2021
Fever model
antipyretic activity, 547
immunoglobulins, 547
Fibrillae
outer membrane protein, 2247
plasmids, 2247
Y. enterocolitica, 2247
Y. pseudotuberculosis, 2247
Fibroblasts
adenylate cyclase, 1854
ADP ribosylation, 1854
antigens, 2148
B. gingivalis, 201
collagenase, 2148
E. coli, 1854
enterotoxins, 1854
gingivae, 2148
growth inhibition, 201
periodontitis, 2148
prostaglandins, 2148
thymocyte-activating factor
autoregulation, 947
spontaneous production, 947
Fibroblast-stimulating factor
cardiomyopathy, 3188
Chagas' disease, 3188
mesenchymal cells, 3188
T. cruzi, 3188
Fibronectin
adherence, 2103
E. coli, 2103
epithelial cells, 2103
group B streptococci, 2404
saliva, 2103
Fibronectins
E. coli, 1715
endotoxins, 1715
enhanced endotoxicity, 1715
Fimbriae
987P, 923
adherence, 86, 123, 455, 472
adhesins, 1940
alpha-glycosides, 472
antigenic analysis, 1600
antigens, 455
B. pertussis, 916
colonization factor
genetics, 1063
morphology, 1063
purification, 1063
E. coli, 86, 123, 455, 472, 923, 968, 1063, 1734, 1940, 2204, 3111
enteritis, 1734
enterotoxigenic variants, 3111
epithelial cells, 455
epitopes, 923
genetic characterization, 123, 281, 1734
intestines, 86
K. pneumoniae, 281
mannose, 472
membrane glycoproteins, 968
monoclonal antibodies, 1600
monoclonal antibody probes, 923
plasmids, 455
polymorphonuclear leukocytes, 968
pyelonephritis, 2204
receptors, 968
S. marcescens, 281, 1600
S. sanguis, 123
S. typhimurium, 281
serological characterization, 2204
serotype 2, 916
serotype 6
characterization, 916
purification, 916
sfa gene, 1940
type 1, 281
Flagella
C. chauvoei, 1779
monoclonal antibodies, 1779
Flagellins
antigens, 828
Campylobacter spp., 828
intestines, 828
Flow cytometry
C. burnetii, 1731
Candida spp., 1490
content analysis
DNA, 1731
protein, 1731
RNA, 1731
DNA synthesis, 1490
L929 cells, 1731
Fluoride
oral microorganisms, 2597
proton-translocating ATPases, 2597
Fowl typhoid
plasmids, 388
S. gallinarum, 388
Fructosyltransferase
glycosylsucrose, 698
oral microorganisms, 698
S. salivarius, 698
Fungicidal activity
B. dermatitidis, 3221
macrophages, 3221
Fusobacterium nucleatum
antigens
cross-reactive, 771
specific, 771
monoclonal antibodies, 771

Galactose
N-acetylgalactosamine, 2327
E. histolytica, 2327
lectins, 2327
galE
S. choleraesuis, 955
vaccines, 955
Gangliosides
C. botulinum, 3051
neurotoxin, 3051
Gastritis
antigens, 1256
C. pylori, 2789
C. pyloridis, 1256
stomach, 2789
Gastrointestinal tract
C. albicans
colonization, 1558
dissemination, 1558
Genetic characterization
A. hydrophila, 2274
A. marginale, 2428
adherence, 2483
adhesins, 1940
aerobactin, 1963
aerobactin genes, 193
aerolysin, 2274
allele replacement, 3103
antigens, 123, 1151, 1421, 2378
B. abortus
mutagenesis, 2774
transposons, 2774
B. bronchiseptica, 497
B. parapertussis, 497
C. burnetii, 848
citrate synthase gene, 848
clonal diversity, 1207
cloning, 792, 1503, 2428, 2870
colicin V, 2483
conjugal transfer, 2483
cytadhesin P1 gene, 3023
deletion mutants, 3035
dextranase gene, 792
DNA library, 1421
DNA probes, 2857
DNA sequence distribution, 1009
E. coli, 123, 193, 428, 848, 1106, 1151, 1156, 1329, 1734, 2483, 2675, 2734, 2870, 3111, 3181
enteritis, 1734
enterotoxigenic variants, 3111
enterotoxin genes, 1329
enterotoxins, 428
Fc receptor, 1233
fimbriae, 123, 281, 1734, 1940, 3111
fowl typhoid, 388
galE, 955
gene coding, 2428
gene mapping, 1718
group A streptococci, 1233, 3237
group B streptococci, 1151
gtfC gene, 2176
H. influenzae (nontypable), 2585
H. influenzae type b, 2870
H. pleuropneumoniae, 1207
hemolysins, 2183, 3225
Ibc protein genes, 1151
immunoglobulins, 1151, 1233
intestines, 2483
K. pneumoniae, 281
L. monocytogenes, 3225
leukotoxin genes, 1987
listeriolysin O, 3225
M. gallisepticum, 2857
M. leprae, 1421

M. pneumoniae, 3023
M protein, 3237
M protein gene, 3181
M. tuberculosis, 1421, 1718
macrophages, 1884
marker exchange mutagenesis, 2274
membrane protein antigen, 1106
mutants
alpha-toxin, 3103
protein A, 3103
Mycobacterium spp., 2378
N. meningitidis, 1503, 2734
Neisseria spp., 1009
outer membrane protein, 2734, 2870
P. brasiliensis, 1919
P. haemolytica, 1987
pertussis toxin, 497
plasmids, 388, 2483, 2538, 2891
pneumolysin, 3225
pneumolysin gene, 1184
protein antigens, 1156
proteins, 1718, 2428
Proteus spp., 2183
R. tsutsugamushi, 1156
resistance, 1919
S. aureus, 428, 3103
S. choleraesuis, 955
S. dysenteriae, 2208
S. equi, 3181
S. flexneri, 1963, 2797
S. gallinarum, 388
S. mansoni, 1884
S. marcescens, 281
S. mutans, 2176, 2538
S. pneumoniae, 1184
S. sanguis, 123
S. sobrinus, 792
S. typhi, 2797
S. typhimurium, 281, 2891, 3035
sfa gene, 1940
Shiga toxin, 2208
Shiga-like toxin, 2675
streptolysin O, 3225, 3228
T. pallidum, 1106
thiol-activated toxins, 3228
toxins, 1184, 3228
transcription, 1734
typhoid vaccine, 2797
urease, 2198
urinary tract, 2198
V. cholerae
operon transcription, 1529
toxin, 1529
vaccines, 955
virulence, 388
Genetic control
immune response, 2768, 3137
major histocompatibility complex, 3137
S. mutans, 3137
toxin A, 2768
Germ tubes
antigens, 616
blastospores, 616
C. albicans, 616
mannoproteins, 616
Giardia lamblia
macrophages, 3155
phagocytes, 3155
trophozoite ingestion, 3155
Gingivae
antigens, 2148
collagenase, 2148
fibroblasts, 947
prostaglandins, 2148
thymocyte-activating factor, 947
Glomeruli
kidneys, 2416
monoclonal antibodies, 2416
proteins, 2416
S. pyogenes, 2416
Glucans
affinity electrophoresis, 3011
binding, 3011
proteins, 3011
S. sobrinus, 3011
D-Glucosamine
analogs, 2287
2-keto-3-deoxyoctonic acid, 2287
lipid A, 2287
β(1-6)-D-Glucosamine disaccharide bisphosphate
acylation, 57
lipid A activity, 57
Glucose
P. anaerobius, 352
proline, 352
transport, 352
Glucosyltransferase
genetic characterization, 2176
immunization, 2562
monoclonal antibodies, 1900
S. mutans, 2176
S. sobrinus, 1900, 2562
Glycine
R. prowazekii, 240
utilization, 240
Glycoconjugates
B. bronchiseptica, 1607
mucosae, 1607
receptors, 1607
Glycoproteins
antibody response, 2619
attachment, 187
C. albicans, 2619
erythrocytes, 187
L. pneumophila, 2234
macrophages, 2234
membranes, 968
P. chabaudi, 187
polymorphonuclear leukocytes, 968
receptors
E. coli, 968
mannose, 968
Glycosphingolipids
A. naeslundii, 487
binding, 487
Glycosylsucrose
fructosyltransferase, 698
oral microorganisms, 698
S. salivarius, 698
Glycylprolyl protease
B. gingivalis, 3131
membranes, 3131
Granules
A. calcoaceticus, 1365, 2296
N-acetylglucosaminidase, 2579
binding, 1536
Chlamydia spp., 2420
defensins, 1365
N. gonorrhoeae, 2579
neutrophils, 1365, 1536, 2579
outer membranes, 2296
peptidoglycans, 2579
polymorphonuclear leukocytes, 2296, 2420
proteins, 1536, 2420
Granulocyte-macrophage colony-stimulating factor
granulomas, 2042
lymphokine production, 2042
S. japonicum, 2042
Granulocytes
chemiluminescence, 758
colony-stimulating factor, 2715
function
bone marrow reserve, 235
marginated, 235
lipopolysaccharides, 758
protection, 2715
Granulomas
antigen Ia, 674
cell walls, 674
granulocyte-macrophage colony-stimulating factor, 2042
L. monocytogenes, 3215
lymphokines, 2042
mononuclear cells, 3215
S. japonicum, 2042
S. mansoni, 2625
streptococci, 674
T cells, 2625
transfer of resistance, 3215
Growth temperature
L. pneumophila, 2701
virulence, 2701
gtfC gene
genetic characterization, 2176
S. mutans, 2176

Haemophilus influenzae
antigenic characterization
lipooligosaccharides, 2902
oligosaccharides, 2902
antigenic diversity, 882
epitopes, 513
heme, 148
lipooligosaccharides, 882
nontypable
genetic diversity, 2585
phenotypic diversity, 2585
oligosaccharides, 513
protein sources, 148
receptors, 2355
type b, 513
Haemophilus influenzae type b
adherence, 2308
antibodies, 2878
anticapsular antibody, 2830
antigens, 2977
capsules, 2308
complement, 283
cross-reactivity, 2977
E. coli, 2993
epithelial cells, 2308
epitopes, 2977
genetic characterization, 2993
lipooligosaccharide
expression stability, 1979
virulence, 1979
lipoproteins, 2878
mutants, 1944
outer membrane proteins, 2612, 2993
peptidoglycans, 2878
protection, 1944, 2612
virulence, 1944
Haemophilus pleuropneumoniae
antigens, 1626
capsular polymer

characterization, 1573, 1580
purification, 1573, 1580
serotype specificity, 1580
clonal diversity, 1207
genetic characterization, 1207
H. (Actinobacillus) pleuropneumoniae, 1626
Haemophilus somnus
abortion, 1381
antigens, 1381
intracellular growth, 381
phagocytes, 381
pneumonia, 1403
respiratory tract, 381
serological characterization, 1381, 1403
Haptens
B. melitensis, 2850
polysaccharides, 2850
HeLa cells
actin polymerization, 2681
binding, 1393
Congo red, 1393
hemin, 1393
iron metabolism, 572
myosin accumulation, 2681
pesticin, 572
phagocytosis, 2681
S. flexneri, 1393, 2681
Yersinia spp., 572
Hemagglutination
adherence, 2093
lipopolysaccharides, 3192
oral microorganisms, 3192
plaque, 3192
V. cholerae, 2093
Hemagglutinins
B. pertussis, 154
cloning, 154
E. coli, 154
mutants, 943
protease, 451
V. cholerae, 451, 943
Heme
H. influenzae, 148
iron metabolism, 2171
N. gonorrhoeae, 2171
N. meningitidis, 2171
protein sources, 148
proteins, 2171
Hemin
binding, 1393
Congo red, 1393
HeLa cells, 1393
S. flexneri, 1393
Hemolysins
A. hydrophila, 1594
alpha-hemolysin, 3233
beta-hemolysin, 2314
El Tor-like hemolysin, 1090
enterotoxicity, 1090
erythrocytes, 1594
genetic characterization, 2183, 3225
group B streptococci, 2314
L. monocytogenes, 1641, 3225
leukotoxin, 3233
listeriolysin O
characterization, 1641
purification, 1641
toxicity, 1641
pathogenicity, 2554
Proteus spp., 2183
Serratia spp., 2554
transposon mutagenesis, 2314
V. cholerae (non-O1), 1090
HEp-2 cells
adherence, 78
comparative abilities to enter and replicate
E. coli, 1674
S. typhimurium, 1674
Y. enterocolitica, 1674
Y. pseudotuberculosis, 1674
E. coli, 78
plasmids, 78
Histamine
basophil activation, 803
S. aureus Cowan 1, 803
Histoenzymology
dehydrogenase, 727
P. carinii, 727
Histoplasma capsulatum
blastogenesis, 937
growth inhibition, 1014
interferons, 1014
lymphocytes, 937
macrophages, 29
mitogens, 937
morphogenesis, 1355
mutants
characterization, 528
isolation, 528
pathogenicity, 1355
superoxide release, 29
Host-parasite interaction
resistance, 1224
urinary tract, 1224
virulence, 1224
Hyaluronidase
syphilis, 1023
T. pallidum, 1023
Hydrophobicity
adherence, 438
cell surface morphology, 438
S. salivarius, 438
Hydroxyapatite
adherence, 1484
cell-to-cell interaction
P. acnes, 1441
S. sanguis, 1441
enzymes, 1484
oral microorganisms, 1484
saliva, 1441
Hypertension
endotoxins, 2471
lipid X, 2471
Hyphae
C. albicans, 2783
calcium, 2783
neutrophils, 2783
Hypochlorite scavenging
alginate, 1806
P. aeruginosa, 1806
Hypochlorous acid
E. coli
inactivation, 2518
metabolism, 2518

Ia-bearing macrophages
interferons, 2300
L. monocytogenes, 2300
Ibc protein genes
antigens, 1151
characterization, 1151
group B streptococci, 1151
immunoglobulins, 1151
Ileitis
C. jejuni, 2240
monoclonal antibodies, 2240
Ileocecitis
C. difficile, 2984
immunization, 2984
protection, 2984
Immune complexes
characterization, 1737
isolation, 1737
pneumococcal pneumonia, 1737
Immune response
aerosol challenge, 1862
antigens, 1346, 3142
bronchoalveolar lavage, 2132
C. trachomatis, 1767
characterization, 3093
cholera toxin, 1997
E. risticii, 2215
enhancement, 668, 2061
exfoliative toxin A, 2768
genetic control, 2768, 3137
genital infection, 1767
immunological unresponsiveness, 3085
interleukins, 668, 1436, 2061
intestines, 1997
K. pneumoniae, 1436
L. mexicana subsp. *amazonensis*, 3142
lesions, 3142
lipopolysaccharides, 1346, 3085, 3093
lymphoid depletion, 2215
M. tuberculosis, 1862, 2037
macrophages, 1346
major histocompatibility complex, 3137
P. aeruginosa, 1436
Peyer's patch, 1997
pregnancy, 2496
S. aureus, 2768
S. mutans, 3137
spleen, 1375
T. canis, 2132
T cells, 2037
T. cruzi, 2496
T. gondii, 856
unresponsiveness, 3093
Immunization
adoptive transfer, 1843
C. difficile, 2984
colony-stimulating factors, 1843
ileocecitis, 2984
L. monocytogenes, 1843
macrophages, 1843
monoclonal antibodies, 1274
S. mutans, 1274
teeth, 1274
Immunoaffinity chromatography
antigens, 227
C. immitis, 227
Immunoblotting
Campylobacter spp., 1564
proteins, 1564
Immunogens
antigens, 482
C. trachomatis, 482
E. coli, 1077
epitopes, 482
heat-stable enterotoxin, 1077
intestines, 477
lipopolysaccharides, 482
mutants, 99
P. aeruginosa, 99
phenotypic variation, 1957
S. minnesota, 482

S. typhimurium, 482
T. vaginalis, 1957
V. cholerae, 477
vaccines, 99
Immunoglobulins
antigens, 1830
antipyretic activity, 547
autoantibodies, 263
auxotypes, 931
Bacteroides spp., 631
Capnocytophaga spp., 631
characterization
antigenic, 631
enzymatic, 631
enterotoxigenic *E. coli*, 1085
Fc receptor, 1233
fever model, 547
group A streptococci, 1233
group B streptococci, 1151
Ibc protein genes, 1151
IgA, 253, 288, 249
beta antigen, 1151
binding, 1151
response, 1085
suppression, 1085
IgA1 protease, 931
IgG, 263, 547, 631, 1233, 1830, 3065
IgM, 263
immune complexes, 1737
iron metabolism, 3065
M. pneumoniae, 1830
M. salivarium, 263
N. gonorrhoeae, 253, 931, 3065
oral microorganisms, 288
parotid agglutinin, 288
Peyer's patches, 1085
pneumococcal pneumonia, 1737
porin proteins, 253
protease, 631
protein gene, 1233
proteins, 1830, 3065
S. mutans, 2409
serovars, 931
Immunogold staining
C. trachomatis, 1324
monoclonal antibodies, 1324
surface antigens, 1324
Immunologic tolerance
C. neoformans, 233
lymphokines, 233
macrophages, 233
models, 233
Immunosuppression
C. periodontii, 2332
cyclosporin A, 1701
delayed-type hypersensitivity, 639
L. monocytogenes, 639
M. bovis BCG, 1701
P. aeruginosa, 639
selective cytotoxicity
lymphocytes, 2332
monocytes, 2332
Immunotherapy
meningitis, 1289
N. fowleri, 1289
Interferons
activity
antichlamydial, 2727
antiproliferative, 2727
antiviral, 2727
C. immitis, 2951
endotoxins, 2574
febrile response, 2574
growth inhibition, 1014
H. capsulatum, 1014
host defense, 1252
Ia-bearing macrophages, 2300
IFN-β, 2574
endotoxin, 1121
fever, 1121
IFN-γ, 335, 446, 1014, 1252, 2017, 2300, 2727, 2777, 2951
induction, 335
interleukins, 335
L. monocytogenes, 2300
leukocytes, 2777
lipopolysaccharides, 335
M. leprae, 446
M. tuberculosis, 2777
macrophages, 446, 2017, 2951
P. acnes, 335
peritoneal cells, 335
pyrogen tolerance, 2574
R. conorii, 1252
R. tsutsugamushi, 2490
T cells, 2490
vitamin D_3, 2017
Interleukins
antigens, 403
endotoxins, 2865
enhanced resistance, 2061
IL-1, 2865
IL-1a, 1436
IL-1α, 2061
IL-2, 335, 403, 668, 2126
immune response, 1436
induction, 2865
interferons, 335
K. pneumoniae, 1436
lipopolysaccharides, 335
lymphocytes, 2126
macrophages, 2865
P. acnes, 335
P. aeruginosa, 1436
peritoneal cells, 335
protection, 668
purified protein derivative, 2126
T. cruzi, 403
toxic shock syndrome toxin, 2865
tuberculosis, 2126
Intestines
adherence, 1431, 2483, 3044
anaerobic flora, 2689
antibodies, 1431
antigens, 828
binding, 1216, 3126
C. albicans
colonization, 1558
dissemination, 1558
C. jejuni, 1431
C. trachomatis, 1137
Campylobacter spp., 828, 1019
cecectomy, 995
cholera toxin, 1997, 3126
colonization, 1924, 2884
colonization resistance, 995
Cryptosporidium sp., 2669
cyclophosphamide, 2669
diarrhea, 1924
E. coli, 1019, 1216, 2483, 2834
E. coli adherence
enterocytes, 69
mucosa, 69
enterocytes, 3044
flagellins, 828
immune response, 1997
immunogens, 477
lymphocytes
cytotoxicity, 1137
immunoregulation, 1137
mesenteric lymph nodes, 2834
microvillus membranes, 3126
mucins, 1216
mucus, 1431, 2884
mutants, 2884
Peyer's patch, 1997
pili, 1216
plasmids, 2483
proctitis, 1137
S. enteritidis, 995
S. typhimurium, 2884, 3044
translocation, 1019, 2689
V. cholerae, 477
Intracellular pH
Bacteroides spp., 864
neutrophil respiratory burst, 864
succinic acid, 864
Iron metabolism
antibodies, 1239
E. coli septicemia, 1239
ferripyochelin-binding protein, 2021
HeLa cells, 572
heme, 2171
immunoglobulins, 3065
lactoferrin, 2293, 2956
lipopolysaccharides, 2956
monocytes, 2956
mutants, 594
N. gonorrhoeae, 2171, 3065
N. meningitidis, 2171
outer membrane proteins, 1239
P. aeruginosa, 2021
pesticin, 572
polymorphonuclear leukocytes, 2956
proteins, 2171, 3065
S. flexneri, 594
transport, 594
tumor necrosis factor, 2956
virulence, 277
Yersinia spp., 277, 572
Iron transport mutants
host iron utilization, 594
S. flexneri, 594
virulence, 594

Keratinolytic activity
bacteria
cutaneous, 621
oral, 621
2-Keto-3-deoxyoctonic acid
analogs, 2287
D-glucosamine, 2287
lipid A, 2287
Kidneys
glomeruli, 2416
monoclonal antibodies, 2416
proteins, 2416
S. pyogenes, 2416
Klebsiella pneumoniae
extracellular toxic complex
characterization, 44
production, 44
fimbriae, 281
genetic characterization, 281
interleukins, 1436
susceptibility
complement, 2741
lipopolysaccharide, 2741

nonimmune serum, 2741
Kupffer cells
bacteremia, 2074
endotoxemia, 2074
endotoxins, 2962
erythrocytes, 2074
peritoneal cells, 2962
phagocytosis, 2074

L929 cells
C. burnetii, 1731
flow cytometry
DNA, 1731
protein, 1731
RNA, 1731
Lactate dehydrogenase
acetoin, 1399
caries, 1399
S. mutans, 1399
Lactoferrin
aerosol challenge, 2293
E. coli, 2293
lipopolysaccharides, 2956
monocytes, 2956
polymorphonuclear leukocytes, 2293, 2956
tumor necrosis factor, 2956
Lectinlike surface components
C. ochracea, 1198
coaggregation, 1198
oral microorganisms, 1198
Lectins
binding
N-acetylgalactosamine, 2327
galactose, 2327
Legionella pneumophila
differential growth, 1369
glycoproteins, 2234
growth temperature, 2701
inhibition, 2234
macrophages, 1369, 2234, 2477
tumor necrosis factor, 433
virulence, 2701
Leishmania donovani
macrophages, 467
susceptibility studies, 467
Leishmania major
cutaneous leishmaniasis, 645
delayed-type hypersensitivity, 645
M. bovis BCG, 1707
metacyclogenesis, 2802
promastigotes
attenuation, 2802
virulence, 2802
protection, 1707
Leishmania mexicana
characterization, 1692
tunicamycin resistance, 1692
virulence, 1692
Leishmania mexicana subsp. *amazonensis*
antigens, 3142
immune response, 3142
lesions, 3142
Leishmania spp.
macrophages, 587
oxidative metabolism, 587
Leprosy
antigens, 1932
etiologic agents, 1932
interferons, 446
M. bovis BCG, 1932
M. leprae, 446, 680, 1203, 2916
macrophages, 446, 1203
activated, 680
normal, 680
metabolism, 1203
phagosome-lysosome fusion, 2916
Lesions
antigens, 3142
L. mexicana subsp. *amazonensis*, 3142
Leukocytes
interferon, 2777
M. tuberculosis, 2777
Leukotoxin
genetic characterization, 1987
P. haemolytica, 1987
Leukotoxins
alpha-hemolysin, 3233
characterization, 2348
E. coli, 3233
P. haemolytica, 2348, 3233
Leukotrienes
alpha-toxin, 104
generation mechanism, 104
polymorphonuclear leukocytes, 104
S. aureus, 104
Levanase
A. viscosus, 3001
characterization, 3001
purification, 3001
Lipids
actin, 1848
E. histolytica, 1848
endotoxins, 2471
epithelial cells, 736
erythrocytes, 304
glycosphingolipids
A. naeslundii, 487
binding, 487
hypertension, 2471
lipid A, 899
activity, 57
antigenicity, 2636
characterization, 57
dephosphorylation, 974
E. coli lipopolysaccharide, 974
D-glucosamine, 2287
immunogenicity, 2636
2-keto-3-deoxyoctonic acid, 2287
lipid X, 2471
macrophages, 974
membranes, 1848
P. carinii, 736
phagocytosis, 1848
phospholipids, 736
T. hyodysenteriae, 304
Lipoarabinomannan
carbohydrates, 2857
M. leprae, 2857
monoclonal antibodies, 2857
Lipoarabinomannans
antigens, 762
M. paratuberculosis, 762
Lipooligosaccharides
antigenic characterization, 2902
antigenic diversity, 882
epitopes, 513, 1652, 1755
H. influenzae, 882, 2902
H. influenzae type b, 513
expression stability, 1979
virulence, 1979
N. gonorrhoeae, 1755, 1792
N. meningitidis, 1652, 1792
phenotypic variation, 1755
Lipopolysaccharides
anaphylactoid reactions, 409
antibodies, 507
antigens, 462, 1346, 1412, 2844
B. burgdorferi, 2311
C. burnetii, 1144
C. jejuni, 1806
cell injury, 507
characterization, 2047
chemiluminescence, 758
cloning, 2844
complement, 507
complexes, 2047
3-deoxy-D-*manno*-octulonosate, 462
E. coli, 974, 2052
endotoxins, 409
epitopes, 462, 1412
granulocytes, 758
hemagglutination, 3192
immune response, 1346
immunological unresponsiveness, 3085, 3093
interferons, 335
interleukins, 335
K. pneumoniae, 2741
lactoferrin release, 2956
lipid A, 974
Lyme disease, 2311
macrophages, 974, 1346
monoclonal antibodies, 211, 462, 1412
cross-genus reactivity, 899
lipid A specificity, 899
monocytes, 2956
muramyl dipeptide, 409
N. gonorrhoeae, 2844
O antigens, 2052
oral microorganisms, 3192
P. acnes, 335
peripheral blood cells, 507
peritoneal cells, 335
plaque, 3192
plasmid-encoded expression, 2052
polymorphonuclear leukocytes, 2956
properties
antigenic, 1806
structural, 1806
R. tsutsugamushi, 2290
resistance, 320
ribosomes, 2047
S. dysenteriae, 1412
S. flexneri, 1412
S. minnesota, 482
S. typhi, 211
S. typhimurium, 211, 482
serological characterization, 320
E. coli, 2706
S. minnesota, 2706
subunits, 320
susceptibility, 2741
T cells, 3093
tumor necrosis factor, 2956
variants
interstrain, 1144
intrastrain, 1144
virulence, 1144
Lipoproteins
antibodies, 2878
H. influenzae, 2878
peptidoglycans, 2878
Liposomes
immunodeficiency, 1426
muramyl dipeptides, 1426
Lipoteichoic acid

adherence, 839, 3057
epithelial cells, 839, 3057
group B streptococci, 3057
localization
S. agalactiae, 2383
S. pyogenes, 2383
S. saprophyticus, 839
Lipoxygenase
endothelial cells, 1447
polymorphonuclear leukocytes, 1447
Listeria monocytogenes
adoptive transfer, 1843
antibacterial resistance, 2061
colony-stimulating factor, 1843
delayed-type hypersensitivity, 639, 3078
enterocytes, 2822
enzymes, 3197
granulomas, 3215
immunosuppression, 639
in vitro model
intracellular growth, 2822
penetration, 2822
interferons, 2300
interleukins, 2061
listeriolysin O
characterization, 1641
purification, 1641
toxicity, 1641
macrophages, 1843, 2300
mononuclear cells, 3215
neutrophils, 3197
oxidative agents, 3197
transfer of resistance, 3078, 3215
Listeriolysin O
characterization, 1641
genetic characterization, 3225
L. monocytogenes, 3225
purification, 1641
toxicity, 1641
Liver
granulomas, 2625
S. mansoni, 2625
T cells, 2625
Lungs
bronchoalveolar lavage fluid, 541
Candida spp., 541
candidacidal activity, 541
M. pulmonis, 2631
pulmonary clearance, 2631
S. aureus
atelectasis, 2747
intrapulmonary growth, 2747
Lyme disease
B. burgdorferi, 2311
lipopolysaccharides, 2311
Lymphocytes
blastogenesis, 937
C. immitis, 1058
C. periodontii, 2332
C. trachomatis, 1137
cytotoxicity, 2332
H. capsulatum, 937
interleukins, 2126
intestines, 1137
mitogens, 937
proctitis, 1137
purified protein derivative, 2126
transformation response suppression, 1058
tuberculosis, 2126
Lymphogranuloma venereum
C. trachomatis, 1137
intestines, 1137
lymphocytes, 1137
proctitis, 1137
Lymphoid depletion
E. risticii, 2215
immune response, 2215
Lymphokines
C. neoformans, 233
E. bovis, 784
eosinophil chemotactic lymphokine, 2042
granulocyte-macrophage colony-stimulating factor, 2042
granulomas, 2042
growth inhibition, 1513
immunologic tolerance, 233
macrophages, 233, 784
monocytes, 784
myeloperoxidase, 1047
myocardial cells, 1513
N. fowleri, 1047
S. japonicum, 2042
T. cruzi, 1513
T. gondii, 784
Lysosomes
C. albicans, 1663
M. leprae, 2916
macrophages, 1663, 2916
phagosome-lysosome fusion, 1663, 2916

Macrophagelike cells
C3, 1101
complement synthesis, 1101
group B streptococci, 1101
Macrophages
activation, 784, 1339, 2234, 2477, 2951
adoptive transfer, 1843
alveolar macrophages, 1476
antigens, 1346
B. dermatitidis, 3221
C. albicans, 1663
C. immitis, 2951
C. neoformans, 233, 233
chemiluminescence, 1476
colony-stimulating factor, 1843
differential growth, 1369
E. bovis, 784
E. coli, 974
endotoxins, 2865, 2962
eucaryotic cells, 521
fungicidal activity, 2951, 3221
G. lamblia, 3155
genetic characterization
larvicidal activity, 1884
vaccine-induced resistance, 1884
glycoproteins, 2234
H. capsulatum, 29
Ia, 2300
immune response, 1346
immunologic tolerance, 233
impairment, 2461
interferons, 446, 2017, 2300, 2951
interleukins, 2865
L. donovani, 467
L. monocytogenes, 1843, 2300
L. pneumophila, 1369, 2234, 2477
larvacidal activity, 3174
Leishmania spp., 587
lipid A, 974
lipopolysaccharides, 974, 1346
lymphokines, 233, 784
M. aurum
degradation, 2006
killing, 2006
M. bovis BCG, 1476
M. leprae, 446, 680, 1203
M. paratuberculosis
ingestion, 1588
intracellular growth, 1588
metabolism, 1203
microbicidal activity, 1635
monoclonal antibodies, 2531
monocytes, 784
neutrophils, 1762
nonoxidative killing, 1635
opsonins, 2531
ornithine decarboxylase, 2461
oxidative metabolism, 587
oxidative response, 2398
P. aeruginosa, 2531
phagocytosis, 1762
phagosome-lysosome fusion, 1663
plasmids, 521
proteins, 2531
S. aureus, 2398
S. flexneri, 521
S. mansoni, 1339, 1884, 3174
superoxide release, 29
susceptibility studies, 467
T. cruzi, 2461
T. gondii, 784, 1635
toxic shock syndrome toxin, 2865
trophozoite ingestion, 3155
tubercle bacilli, 2945
tumoricidal inhibitors, 3174
vaccines, 1339, 1476
vitamin D_3, 2017, 2945
Major histocompatibility complex
genetic control, 3137
immune response, 3137
S. mutans, 3137
Malaria
antibodies, 888
antigenic polymorphism, 2604
crisis forms, 1722
eosinophils, 877
killing, 877
merozoites, 888
monoclonal antibodies, 2604
P. falciparum, 877, 888, 1722
P. vivax, 369, 2604
P. yoelii, 490
parasite invasion
erythrocytes, 342
inhibition, 342
polypeptides, 342
transmission-blocking immunity, 369
tumor necrosis factor, 1722
virulence, 490
Malarial peptide
epitopic response, 2658
P. knowlesi, 2658
tetanus toxoid, 2658
Mannoproteins
antigens, 616
blastospores, 616
C. albicans, 616
germ tubes, 616
Mannose
adherence, 472
adhesins, 1837
alpha-glycosides, 472
E. coli, 472, 968, 1837
fimbriae, 472
membrane glycoproteins, 968
polymorphonuclear leukocytes, 968
receptors, 968

Marker exchange mutagenesis
A. hydrophila, 2274
aerolysin, 2274
Mastitis
protein antigen, 1170
S. agalactiae, 1170
Melanomas
adherence, 2754
erythrocytes, 2754
P. falciparum, 2754
Membrane glycoproteins
E. coli, 968
fimbriae, 968
polymorphonuclear leukocytes, 968
receptors, 968
Membranes
A. hydrophila, 1594
actin, 1848
adherence, 2721
alpha-toxin, 2940
B. gingivalis, 3131
binding, 2940
E. histolytica, 1848
erythrocytes, 1594, 2940
glycylprolyl protease, 3131
hemolysins, 1594
lipids, 1848
M. pulmonis, 1314
matrix proteins, 2721
microvillus membranes
binding, 3126
cholera toxin, 3126
intestines, 3126
oral microorganisms, 2721
phagocytosis, 1848
S. aureus, 2940
surface antigens, 1314
Meningitis
immunotherapy, 1289
N. fowleri, 1289
Merozoites
antibodies, 888
malaria, 888
P. falciparum, 888
Mesenchymal cells
cardiomyopathy, 3188
Chagas' disease, 3188
fibroblast-stimulating factor, 3188
T. cruzi, 3188
Mesenteric lymph nodes
E. coli, 2834
intestines, 2834
Metacyclogenesis
L. major, 2802
promastigotes
attenuation, 2802
virulence, 2802
Microvilli
binding, 3126
cholera toxin, 3126
membranes, 3126
Mitogens
blastogenesis, 937
H. capsulatum, 937
lymphocytes, 937
Monoclonal antibodies
alpha-toxin, 2933
antigenic analysis, 1600
antigenic polymorphism, 2604
antigens, 7, 266, 462, 604, 1412, 2759, 2922
C. *chauvoei* flagella
characterization, 1779
production, 1779
protection, 1779
C. jejuni, 2240
C. neoformans, 742, 749, 1895
C. *trachomatis*, 1324
caprine pleuropneumonia, 3219
capsular polysaccharides, 742, 1895
carbohydrates, 2857
cell wall antigen, 810
complement, 1867
cross-genus reactivity, 899
cross-reactive antigens, 771
3-deoxy-D-*manno*-octulonosate, 462
E. coli, 923
endotoxins, 1927
epitopes, 462, 825, 923, 1000, 1412, 1867
carbohydrate, 810
protein, 810
F. nucleatum, 771
fimbriae, 923, 1600
glomeruli, 2416
glucosyltransferases, 1900
immunization, 1274
immunogold staining, 1324
immunoprotection, 1927
kidneys, 2416
lipid A specificity, 899
lipoarabinomannan, 2857
lipopolysaccharides, 462, 899, 1412
M. hyorhinis, 1094
M. intracellulare, 711
M. leprae, 1000, 2857
M. tuberculosis, 2922
macrophages, 2531
malaria, 2604
mutans streptococci, 2759
mycoplasmas, 3219
N. meningitidis, 1927
oligosaccharides, 211
opsonins, 2531
oral microorganisms, 266, 771
P. aeruginosa, 1051, 2531, 2854
P. vivax, 2604
P. yoelii, 604
pertussis toxin, 909
proliferative ileitis, 2240
proteins, 825, 1000, 2416, 2531, 2759
R. conorii, 7
R. rickettsii, 825
S. dysenteriae, 1412
S. flexneri, 1412
S. marcescens, 1600
S. mutans, 810, 1274
S. pyogenes, 2416
S. sobrinus, 1900
S. typhi, 211
S. typhimurium, 211
serological characterization, 2854
serotype strains, 1051
serovars, 711
sporozoites, 604
Streptococcus spp., 266
surface antigens, 1324
surface proteins, 1094
T cells, 7
teeth, 1274
toxin activity, 909
Triton X-114 phase fractionation, 1094
Monocytes
C. periodontii, 2332
cytotoxicity, 2332
E. bovis, 784
lactoferrin, 2956
lipopolysaccharides, 2956
lymphokines, 784
M. paratuberculosis
ingestion, 1588
intracellular growth, 1588
macrophages, 784
oxidative response, 2398
polymorphonuclear leukocytes, 2956
S. aureus, 2398
T. gondii, 784
tumor necrosis factor, 2956
Mononuclear cells
granulomas, 3215
L. monocytogenes, 3215
transfer of resistance, 3215
Mosquitoes (*Aedes* spp.)
B. anthracis, 1859
bacterial transmission, 1859
Mucins
adhesins, 600
binding, 1216
E. coli, 1216
P. aeruginosa, 600
pili, 1216
tracheobronchial mucins, 600
Mucoid
capsules, 2191
polysaccharides, 2191
S. aureus, 2191
Mucosae
antibodies, 2317
B. bronchiseptica, 1607
bone resorption, 2110
chlamydial infections, 2317
estradiol, 2317
glycoconjugates, 1607
immunoglobulins, 253
N. gonorrhoeae, 253
P. multocida, 2110
porin proteins, 253
receptors, 1607
toxins, 2110
Mucus
adherence, 1431
antibodies, 1431
C. jejuni, 1431
Campylobacter spp., 828
colonization, 2884
flagellins, 828
intestines, 828, 1431, 2884
S. typhimurium, 2884
Muramyl dipeptides
anaphylactoid reactions, 409
endotoxins, 409
immunodeficiency, 1426
lipopolysaccharides, 409
liposomes, 1426
Muramyl peptides
M. tuberculosis, 1279
necrosis, 1279
Mutagenesis
B. abortus, 2774
transposons, 2774
Mutants
aerobactin, 1963
allele replacement, 3103
B. pertussis, 2465
deletion mutants
genetic characterization, 3035
S. typhimurium, 3035
H. capsulatum
characterization, 528
isolation, 528

H. influenzae type b, 1944
hemagglutinins, 943
lipopolysaccharide-deficient mutant, 2884
protection, 1944
S. aureus, 3103
S. flexneri, 1963
S. typhimurium, 2884
toxins, 2465
V. cholerae, 943
virulence, 1944
Mycobacterium africanum
antigens, 2378
genetic characterization, 2378
Mycobacterium aurum
macrophages
degradation, 2006
killing, 2006
Mycobacterium bovis BCG
antigens, 1932, 2378, 3213
chemiluminescence, 1476
cyclosporin A, 1701
E. coli, 1466
genetic characterization, 2378
immunosuppression, 1701
L. major, 1707
leprosy, 1932
macrophages, 1476
protection, 1707
protein antigen
characterization, 245
identification, 245
purification, 245
proteins, 3213
characterization, 1466
immunogenicity, 1466
sequencing, 1466
tuberculosis, 1932
vaccine efficacy
diet, 314
genetics, 314
vaccines, 1476
Mycobacterium intracellulare
serovar-specific monoclonal antibodies
characterization, 711
production, 711
Mycobacterium leprae
antibodies, 1000
antigens, 1421, 1421
carbohydrates, 2857
DNA, 1421, 1421
epitopes, 1000
genetic characterization, 1421, 1421
interferons, 446
lipoarabinomannan, 2857
M. tuberculosis, 1421, 1421
macrophages, 446, 1203, 2916
activated, 680
normal, 680
metabolism, 1203
monoclonal antibodies, 2857
phagosome-lysosome fusion, 2916
proteins, 1000
Mycobacterium lepraemurium
delayed-type hypersensitivity, 564
T-cell clones, 564
Mycobacterium paratuberculosis
antigens, 762
ingestion, 1588
intracellular growth, 1588
lipoarabinomannans, 762
macrophages, 1588
monocytes, 1588
Mycobacterium spp.
delayed-type hypersensitivity, 564
T-cell clones, 564
Mycobacterium tuberculosis
aerosol challenge, 1862
antigenic reactivity
allergenic, 2922
blastogenic, 2922
antigens, 2378, 3149
clones, 2223
genetic characterization, 2378
immune response, 1862, 2037
interferons, 2777
leukocytes, 2777
muramylpeptides, 1279
necrosis, 1279
neutrophils, 2304
proteins, 3149
genetic characterization, 1718
restriction site maps, 1718
respiratory burst, 2304
T cells, 2037, 2223
Mycoplasma gallisepticum
DNA probes, 2857
genetic characterization, 2857
Mycoplasma genitalium
epitopes
M. pneumoniae, 49
proteins, 49
M. pneumoniae, 1126
proteins, 1126
Mycoplasma hyorhinis
antigenic mimicry, 1680
monoclonal antibodies, 1094
polypeptide, 1680
surface proteins, 1094
Triton X-114 phase fractionation, 1094
Mycoplasma pneumoniae
antigens, 1830
cytadhesin P1 gene
cloning, 3023
sequence analysis, 3023
epitopes
adhesin protein, 49
M. genitalium, 49
genetic characterization, 3023
immunoglobulins, 1830
M. genitalium, 1126
proteins, 1126, 1830
Mycoplasma pulmonis
antibodies, 731
antigens, 731
immune response, 731
membranes, 1314
protein variability, 2838
pulmonary clearance, 2631
surface antigens, 1314
Mycoplasma salivarium
autoantibodies, 263
immunoglobulins, 263
Mycoplasmas
caprine pleuropneumonia, 3219
monoclonal antibody, 3219
Myeloperoxidase
A. actinomycetemcomitans, 1029
A. fumigatus, 2088
lymphokines, 1047
N. fowleri, 1047
neutrophils, 1029, 1047
oxidative killing, 2088
Myocardial cells
lymphokines, 1513
T. cruzi, 1513
Myosin
accumulation, 2681
HeLa cells, 2681
phagocytosis, 2681
S. flexneri, 2681

Naegleria fowleri
immunotherapy, 1289
killing, 1047
lymphokines, 1047
meningitis, 1289
myeloperoxidase, 1047
neutrophils, 1047
Naegleria spp.
complement, 2442
lysis, 2442
Natural killer cells
activity, 986
alkaline protease, 986
C. trachomatis, 223
elastase, 986
P. aeruginosa, 986
pneumonitis agent, 223
Necrosis
M. tuberculosis, 1279
muramylpeptides, 1279
Neisseria gonorrhoeae
N-acetylglucosaminidase, 2579
antigen H.8, 1190
antigens, 2844
cloning, 2844
epitopes, 1755
granules, 2579
heme, 2171
immunoglobulins, 253, 3065
iron metabolism, 2171, 3065
lipooligosaccharides, 1755, 1792
lipopolysaccharides, 2844
neutrophils, 2579
oligosaccharide characterization, 1792
outer membrane proteins
induction, 1359
repression, 1359
oxygen metabolism, 1359
peptidoglycans, 2579
phenotypic variation, 1755
plasmids, 3017
porin, 253
protease
auxotypes, 931
serovars, 931
protein I, 273, 1190
protein II, 2026
binding properties, 141
chemical characterization, 141
proteins, 253, 2171, 3065
serological characterization, 273
serum resistance, 3017
Neisseria meningitidis
clonal population structure, 1503
complement activation, 174
E. coli, 2734
endotoxins, 1927
epitopes, 1652
genetic characterization, 1503, 2734
heme, 2171
immunoprotection, 1927
iron metabolism, 2171
lipooligosaccharides, 1652, 1792
monoclonal antibodies, 1927
oligosaccharide characterization, 1792
outer membrane proteins, 2734

proteins, 2171
sialic acid, 174
Neisseria spp.
DNA sequence distribution, 1009
genetic characterization, 1009
lipooligosaccharides, 1792
oligosaccharide characterization, 1792
Neuraminidase
characterization, *1*
E. histolytica, 181
group B streptococci, 1
Neurotoxins
C. botulinum, 3051
cerebrosides, 3051
fatty acids, 3051
gangliosides, 3051
Neutrophils
A. actinomycetemcomitans, 1029
A. calcoaceticus, 1365
N-acetylglucosaminidase, 2579
B. fragilis, 1725
binding, 1536
C. albicans hyphae
opsonized, 2783
unopsonized, 2783
calcium, 2783
chemotaxis, 1725, 2262
defensin
antimicrobial activity, 2281
purification, 2281
structure, 2281
defensins, 1365
endothelial cells, 1455
free calcium distribution, 1784
granules, 1365, 1536, 2579
L. monocytogenes, 3197
lymphokines, 1047
M. tuberculosis, 2304
macrophages, 1762
myeloperoxidase, 1029, 1047
N. fowleri, 1047
N. gonorrhoeae, 2579
opsonins, 1455
oxidative agents, 3197
oxidative response, 2398
peptidoglycans, 1725, 2579
periodontitis, 2262
phagocytosis, 1784
phagocytosis-stimulating factor, 1762
proteins, 1536, 2262
respiratory burst, 2304
Bacteroides spp., 864
intracellular pH, 864
succinic acid, 864
S. aureus, 1455, 2398
superoxide production, 1784
Nucleoside triphosphate hydrolase
antigens, 1332
T. gondii, 1332
Nucleotides
sequencing, 3228
streptolysin O, 3228
toxins, 3228

Oligonucleotide-directed mutagenesis
cysteine, 2121
E. coli, 2121
enterotoxins, 2121
Oligosaccharides
antigenic characterization, 2902
characterization
N. gonorrhoeae, 1792
N. meningitidis, 1792
epitopes, 513
H. influenzae, 2902
H. influenzae type b, 513
Oocysts
antigens, 2436
C. parvum, 2436
circumsporozoites, 2928
P. ovale, 2928
proteins, 2928
Operons
toxins, 1529
transcription, 1529
V. cholerae, 1529
Opsonins
antiflagellar serum, 3204
endothelial cells, 1455
macrophages, 2531
monoclonal antibodies, 2531
P. aeruginosa, 2531, 3204
phagocytosis, 3204
polymorphonuclear leukocytes, 1455
proteins, 2531
S. aureus, 1455
Oral microorganisms
A. actinomycetemcomitans, 686, 692, 1029
adherence, 111, 123, 1484
aerotolerance, 169
agglutination, 1264
antigens, 266, 771
attachment, 2721
B. gingivalis, 111, 201, 716, 832, 2534
bacteriocin, 686, 692
C. ochracea, 1198
caries, 2341
cloning, 792
coaggregation, 1198
actinomyces, 2695
mutans streptococci, 2695
cohesive interaction
A. viscosus, 2391
B. gingivalis, 2391
dextranase gene, 792
enzymes, 652, 1484
epitopes
carbohydrate, 810
protein, 810
extracellular vesicles, 111
F. nucleatum, 771
fibroblasts, 201
fimbriae, 123
fluoride, 2597
fructosyltransferase, 698
genetic characterization, 123, 792
glucose-limited growth, 169
glycosylsucrose, 698
hemagglutination, 3192
high-avidity binding, 1029
hydroxyapatite, 1484
immunization, 1474
immunoglobulin A, 288
immunoglobulins, 2409
keratinolytic activity, 621
lectinlike surface components, 1198
lipopolysaccharides, 3192
M. salivarium, 263
matrix, 2721
membranes, 2721
monoclonal antibodies, 266, 771, 810, 1274
mouse infection model, 2534
myeloperoxidase, 1029
parotid agglutinin, 288
periodontitis, 111, 686, 692, 832
protease, 716
proteins, 2721
proton-translocating ATPases, 2597
S. mutans, 169, 652, 810, 1264, 1274, 2341, 2409
S. salivarius, 698
S. sanguis, 123, 652
S. sobrinus, 792
sialoglycoprotein complex, 1264
Streptococcus spp., 266
sugar metabolism, 652
Ornithine decarboxylase
macrophage impairment, 2461
T. cruzi, 2461
Outer membrane
B. melitensis, 609
fragment release, 609
Outer membrane proteins
antibodies, 1239, 2612
antigenic determinants, 258
antigens, 822
B. abortus, 258
biosynthesis, 162
C. trachomatis, 162, 2570
Campylobacter spp., 1564
delayed-type hypersensitivity, 822
disulfide cross-linking, 162
E. coli, 258, 1239, 2734
electrophoresis, 1564
epitopes, 2570
fibrillae, 2247
genetic characterization, 2734
H. influenzae type b, 2612, 2993
immune response, 253
immunoblotting, 1564
immunoglobulins, 253
induction, 1359
iron metabolism, 1239
N. gonorrhoeae, 253, 1359
N. meningitidis, 2734
oxygen metabolism, 1359
plasmids, 2247
porin, 822
protection, 816, 2612
repression, 1359
S. typhi, 822
S. typhimurium, 816, 822
Yersinia spp., 2247
Outer membranes
A. calcoaceticus, 2296
granules, 2296
polymorphonuclear leukocytes, 2296
Ovomacroglobulin
P. aeruginosa, 2509
protease suppression, 2509
S. marcescens, 2509
Oxidative agents
enzymes, 3197
killing, 3197
L. monocytogenes, 3197
neutrophils, 3197
Oxidative killing
A. fumigatus, 2088
myeloperoxidase, 2088
Oxidative metabolism
E. coli, 534
Leishmania spp., 587
macrophages, 587
pili, 534
polymorphonuclear leukocytes, 534
stimulation, 534

Oxidative response
macrophages, 2398
monocytes, 2398
neutrophils, 2398
S. aureus, 2398
Oxygen metabolism
N. gonorrhoeae, 1359
outer membrane proteins, 1359

Paracoccidioides brasiliensis
genetic characterization, 1919
resistance, 1919
Parasites
antigens, 403
cell surface properties, 2255
complement, 358
E. histolytica, 181
immune response, 403
interleukins, 403
neuraminidase, 181
P. chabaudi, 187
T. cruzi, 403
T. lewisi, 358
T. pallidum, 2255
Parotid agglutinin
immunoglobulin A, 288
oral microorganisms, 288
Passive transfer
granulomas, 3215
L. monocytogenes, 3215
mononuclear cells, 3215
resistance, 3215
Pasteurella haemolytica
alpha-hemolysin, 3233
genetic characterization, 1987
leukotoxin, 1987, 3233
characterization, 2348
identification, 2348
Pasteurella multocida
bone resorption, 2110
mucosae, 2110
potassium thiocyanate extract, 2967
toxins, 2110
vaccines, 2967
Pellicle
adherence, 1552
S. sanguis, 1552
sialic acid, 1552
Peptide mapping
electrophoresis, 843
protein A, 843
S. aureus, 843
Western blot, 843
Peptidoglycan-polysaccharide fragments
acetylation, 16
arthropathic activity, 16
group A streptococci, 16
Peptidoglycans
N-acetylglucosaminidase, 2579
antibodies, 2878
B. fragilis, 1725
B. pertussis, 2117
chemotaxis, 1725
cytotoxins, 2117
degradation, 2579
granules, 2579
H. influenzae, 2878
lipopolysaccharides, 2290
lipoproteins, 2878
N. gonorrhoeae, 2579
neutrophils, 1725, 2579
R. tsutsugamushi, 2290

Peptostreptococcus anaerobius
characterization, 352
glucose, 352
proline, 352
Periodontitis
A. actinomycetemcomitans, 686, 692
antibodies, 832
antigens, 832
B. gingivalis, 111, 832
bacteriocin, 686, 692
cell surface protein, 2262
collagenase, 2148
extracellular vesicles, 111
fibroblasts, 2148
neutrophil chemotaxis, 2262
prostaglandins, 2148
Peripheral cells
Aeromonas spp., 3070
autoagglutination, 3070
mesophilic aeromonads, 3070
virulence markers, 3070
Peritoneal cells
endotoxins, 2962
interferons, 335
interleukins, 335
Kupffer cells, 2962
lipopolysaccharides, 335
P. acnes, 335
Pertussigen
anaphylaxis, 1004
antigens, 1004
encephalopathy, 1004
Pertussis toxin
A subunit, 24
activities, 2546
activity, 909, 1294
anaphylaxis, 1004
antigens, 1004
B. bronchiseptica, 497
B oligomer, 1132
B. parapertussis, 497
B. pertussis, 1309, 2465
CHO cell morphology, 24
E. coli, 1321, 2546
encephalopathy, 1004
fetuin-agarose, 1294
genetic characterization, 497
immune response, 1132
monoclonal antibodies, 909
mutants, 2465
pertussigen, 1004
radioiodination, 1294
subunits, 1309, 2546
expression, 963, 1321
properties, 963
S-1, 1321
transposons, 1309
Pesticin
HeLa cells, 572
iron storage, 572
Yersinia spp., 572
Peyer's patches
cholera toxin, 1997
E. coli, 1085
immune response, 1997
immunoglobulins
IgA, 1085
response, 1085
intestines, 1997
Phagocytes
H. somnus, 381
respiratory tract, 381
Phagocytosis
actin, 1848
actins, 2681
C. difficile, 1541
E. histolytica, 1848
erythrocytes, 2074
free calcium distribution, 1784
HeLa cells, 2681
Kupffer cells, 2074
lipids, 1848
macrophages, 1762
membranes, 1848
myosin, 2681
neutrophils, 1762, 1784
P. aeruginosa, 2841
plasmids, 1176
polymorphonuclear leukocytes, 1541
S. flexneri, 2681
stimulating factor, 1762
superoxide production, 1784
Y. enterocolitica, 1176
Phagosome-lysosome fusion
assessment discrepancy, 1663
C. albicans, 1663
lysosomes, 1663
M. leprae, 2916
macrophages, 1663, 2916
Phase fractionation
M. hyorhinis, 1094
membrane antigens, 1094
Phase variation
group A streptococci, 2448
proteins, 2448
Phenotypic variation
epitopes, 1755
immunogens, 1957
lipooligosaccharides, 1755
N. gonorrhoeae, 1755
S. epidermidis, 2870
slime production, 2870
T. vaginalis, 1957
Phospholipase
cytolysin, 3209
erythrocytes, 3209
V. damsela, 3209
Phospholipase C
in vivo activity, 1728
P. aeruginosa, 1728
Phospholipids
epithelial cells, 736
P. carinii, 736
Pili
adherence, 1774
antigens, 555
bindi ɜ, 1216
E. coli, 293, 373, 534, 555
enterotoxigenic *E. coli*, 1216
epidermal cells, 1774
F41, 555
intestinal mucins, 1216
oxidative metabolism, 534
P, 293
P. aeruginosa, 1774
polymorphonuclear leukocytes, 534
type 1, 293, 373, 534
urinary tract, 373
Plaque
hemagglutination, 3192
lipopolysaccharides, 3192
oral microorganisms, 3192
Plasma fibronectin
E. coli, 1715
enhanced endotoxicity, 1715
Plasma kallikrein-kinin system

activation, 1936
protease, 1936
V. vulnificus, 1936
Plasmids
adherence, 78, 455, 237, 2483
antigens, 455, 1929
colicin Ia, 1929
complement, 2645
E. coli, 78, 455, 1929, 2052, 2370, 2483, 3117
enterotoxins, 1929
epithelial cells, 455
eucaryotic cells, 521
fibrillae, 2247
fimbriae, 455
fowl typhoid, 388
HEp-2 cells, 78
intestines, 2483
lipopolysaccharides, 2052
macrophages, 521
N. gonorrhoeae, 3017
O antigens, 2052
outer membrane proteins, 2247
phagocytosis, resistance to, 1176
putative colonization factor, 1929
resistance, 2645
S. flexneri, 521
S. gallinarum, 388
S. mutans, 2538
S. typhimurium, 2645, 2891
serum resistance, 3017
toxins, 3117
virulence, 388, 2891
Y. enterocolitica, 1176
Yersinia spp., 2247
Plasmin
group A streptococci, 1914
receptors, 1914
Plasmodium chabaudi
attachment, 187
erythrocytes, 187
glycoproteins, 187
Plasmodium falciparum
adherence, 2754
antibodies, 888
antigens, 1387
antimalarial polypeptide, 342
crisis-form induction, 1722
eosinophils, 877
erythrocytes, 342, 2754
inhibition, 342
killing, 877
malaria, 888
merozoites, 888
polypeptides, 1387
protective immunity, 1387
secretory products, 877
tumor necrosis factor, 1722
Plasmodium knowlesi
epitopic response, 2658
malarial peptide, 2658
tetanus toxoid, 2658
Plasmodium ovale
circumsporozoites, 2928
oocysts, 2928
proteins, 2928
Plasmodium vivax
antigenic polymorphism, 2604
malaria, 369, 2604
monoclonal antibodies, 2604
transmission-blocking immunity, 369
Plasmodium yoelii
antigens, 604
immunosuppression, 490
monoclonal antibodies, 604
sporozoites, 604
virulence, 490
Platelets
aggregation, 1743
viridans streptococci, 1743
Plesiomonas shigelloides
pathogenicity
in vitro, 979
in vivo, 979
Pleuropneumonia
caprine pleuropneumonia, 3219
monoclonal antibodies, 3219
mycoplasmas, 3219
Ploidy
C. stellatoidea, 3207
DNA content, 3207
Pneumocystis carinii
dehydrogenase, 727
epithelial cell interaction, 736
histoenzymology, 727
phospholipid profile, 736
Pneumolysin
genetic characterization, 3225
L. monocytogenes, 3225
Pneumolysins
gene
characterization, 1184
cloning, 1184
sequencing, 1184
S. pneumoniae, 1184
toxins, 1184
Pneumonia
B. bronchiseptica, 217
B cells, 2387
C. trachomatis, 2387
H. somnus, 1403
immune complexes, 1737
pneumococcal pneumonia, 1737
serological characterization, 1403
toxins, 217
Pneumonitis
C. trachomatis, 223
natural killer cells, 223
Polymorphonuclear leukocytes
A. calcoaceticus, 2296
adenylate cyclase, 135
aerosol challenge, 2293
alpha-toxin, 104
B. fragilis, 1725
B. pertussis, 135
C. difficile, 1541
chemiluminescence, 758
chemotaxis, 1725
Chlamydia spp., 2420
defensins, 568
E. coli, 534, 968, 2293
E. coli digestion, 2142
endothelial cells, 1447
fimbriae, 968
granules, 2296, 2420
group B streptococci, 1243
intracellular killing, 1243
lactoferrin, 2293, 2956
leukotrienes, 104
lipopolysaccharides, 758, 2956
lipoxygenase, 1447
macrophages, 1762
membrane glycoproteins, 968
monocytes, 2956
outer membranes, 2296
oxidative metabolism, 534
peptidoglycans, 1725
phagocytosis, 1243, 1541, 1762
pili, 534
proteins, 2420
pyocyanine, 559
receptors, 968
respiratory burst, 2142
S. aureus, 104
superoxide production, 559
tumor necrosis factor, 2956
Polypeptides
antigenic mimicry, 1680
antigens, 1387
antimalarial activity, 342
M. hyorhinis, 1680
malaria, 342
P. falciparum, 342, 1387
Polyprenol
dihydroheptaprenol, 2164
E. coli, 2164
resistance, 2164
Polysaccharides
antibodies, 1375
antigens, 871, 1375, 3006
B. melitensis, 2850
C. neoformans, 1895
capsules, 1819, 1895, 2191, 2662
E. coli, 2662
E. saburreum, 871
haptens, 2850
monoclonal antibodies, 1895
mucoid, 2191
P. aeruginosa, 1547
S. aureus, 2191
S. mutans, 3006
S. pneumoniae, 1819
spleen, 1375
toxins, 1547
vaccines, 1547
virulence, 2662
Polyvalent synthetic vaccine
antibody induction, 1498
construction, 1498
Pore formation
complement, 206
E. coli, 206
Porin
antigens, 822
delayed-type hypersensitivity, 822
immunoglobulins, 253
mucosae, 253
N. gonorrhoeae, 253
proteins, 253
S. typhi, 822
S. typhimurium, 822
Potassium thiocyanate
P. multocida, 2967
vaccines, 2967
Pregnancy
immune response, 2496
T. cruzi, 2496
Proctitis
C. trachomatis, 1137
intestines, 1137
lymphocytes, 1137
Proline
glucose utilization, 352
P. anaerobius, 352
Promastigotes
L. major, 2802
metacyclogenesis, 2802
Propionibacterium acnes
cell-to-cell interaction, 1441

hydroxyapatite, 1441
interferons, 335
interleukins, 335
lipopolysaccharides, 335
peritoneal cells, 335
S. sanguis, 1441
saliva, 1441
Prostaglandins
antigens, 2148
collagenase, 2148
gingivae, 2148
PGE_2, 2148
Protease
B. gingivalis, 716
characterization, 420
purification, 420
characterization, 716
E. coli, 2057
enterotoxins, 2057
hemagglutinins, 451
isolation, 716
N. gonorrhoeae
auxotypes, 931
serovars, 931
natural killer cells, 986
P. aeruginosa, 986
plasma kallikrein-kinin system, 1936
V. cholerae, 451
V. vulnificus, 1936
Proteases
antigens, 631
B. gingivalis, 3131
Bacteroides spp., 631
Capnocytophaga spp., 631
immunoglobulin, 631
membranes, 3131
P. aeruginosa, 2509
pathogenicity, 2509
S. marcescens, 2509
suppression, 2509
Proteinase
C. immitis, 1970
characterization, 1970
isolation, 1970
Proteins
A. actinomycetemcomitans, 2320
actin, 2324
adhesins, 49
affinity electrophoresis, 3011
agglutination, 1264
anaerobiosis, 2320
antibodies, 1000
antigens, 1830, 2137, 2759, 3213
B. abortus, 258
binding, 141, 1536, 1878
C. albicans, 616, 2324, 2619
C. trachomatis, 162, 2570
Campylobacter spp., 1564
cell surface, 2262
chemical characterization, 141
chemotaxis, 2262
Chlamydia spp., 2420
circumsporozoites, 2928
colony opacity, 2448
delayed-type hypersensitivity, 822
E. coli, 258, 1239, 1466
cloning, 3181
expression, 3181
epitopes, 825, 1000, 2570
erythrocytes, 187
expression, 2448
ferripyochelin, 2021
genetic characterization, 1718, 3103, 3237
glomeruli, 2416
glucans, 3011
glycoproteins, 187, 968, 2234, 2619
granules, 1536, 2420
group A streptococci, 2448, 3237
group G streptococci, 753
H. influenzae, 148
H. influenzae type b, 2612, 2993
heme, 148, 2171
immunoglobulins, 253, 1830, 3065
immunological activity, 3149
iron metabolism, 277, 1239, 2171, 3065
kidneys, 2416
M. bovis BCG, 1466, 3213
M. bovis BCG antigen
characterization, 245
identification, 245
purification, 245
M. genitalium, 1126
M. hyorhinis, 1094
M. leprae, 1000
M. pneumoniae, 1126, 1830
M proteins, 502, 753, 2448, 3181, 3237
M. pulmonis, 2838
M. tuberculosis, 1718, 3149
macrophages, 2531
mannoproteins, 616
matrix proteins, 2721
membranes, 2721
monoclonal antibodies, 825, 1094, 2416, 2531, 2759
mutans streptococci, 2759
N. gonorrhoeae, 141, 253, 273, 1190, 1359, 2026, 2171, 3065
N. meningitidis, 2171, 2734
neutrophils, 1536, 2262
oocysts, 2928
opsonins, 2531
oral microorganisms, 2721
outer membrane proteins, 162, 258, 816, 822, 1239, 1359, 1564, 2247, 2570, 2612, 2734, 2993
P. aeruginosa, 2021, 2531
P. chabaudi, 187
P. ovale, 2928
periodontitis, 2262
phase variation, 2448
polymorphonuclear leukocytes, 968, 2420
porin, 253
protein A, 3103
protein A heterogeneity
electrophoresis, 843
peptide mapping, 843
Western blot, 843
protein F, 2531
protein I, 273, 1190
protein II, 141, 2026
protein M, 2416
protein S (vitronectin), 1878
purified protein derivative, 2126
R. prowazekii, 2032
R. rickettsii, 825
receptors, 968
restriction site maps, 1718
S. aureus, 843
S. equi, 3181
S. mutans, 1264
S. pyogenes, 2416
S. sobrinus, 3011
S. typhimurium, 816
serological characterization, 273
shared epitopes
M. genitalium, 49
M. pneumoniae, 49
sialoglycoprotein complex, 1264
streptococci
group A, 502
group G, 502
surface protein, 2759
synthesis, 2032
T. gondii, 2137
T. pallidum
genetic characterization, 1106
membrane protein, 1106
T. vaginalis, 1037
Triton X-114 phase fractionation, 1094
variability, 2838
virulence, 277, 2021
Yersinia spp., 277, 2247
Proteus spp.
genetic characterization, 2183
hemolysins, 2183
Proton-translocating ATPases
oral microorganisms, 2597
fluoride, 2597
Pseudomonas aeruginosa
adherence, 1523, 1774
adhesins, 600
alginate, 1517, 1806
alkaline protease, 986
antiflagellar serum, 3204
binding, 1517
chamber implant model, 2841
cilia, 1523
colonial dissociation, 2841
cystic fibrosis, 2364
delayed-type hypersensitivity, 639
elastase, 986
epidermal cells, 1774
epithelial cells, 1517, 1523
exoenzyme S, 579
ferripyochelin, 2021
hypochlorite scavenging, 1806
immunosuppression, 639
in vivo activity, 1728
interleukins, 1436
macrophages, 2531
monoclonal antibodies, 2531, 2854
characterization, 1051
production, 1051
mutants
growth characteristics, 99
immunogenicity, 99
natural killer cells, 986
opsonins, 2531, 3204
phagocytosis, 2841, 3204
phospholipase C, 1728
pili, 1774
polysaccharides, 1547
protease
suppression, 2509
virulence, 2509
proteins, 2021, 2531
saliva-mediated aggregation, 2364
serotype strains, 2854
sialic acid, 2364
toxins, 1547
tracheobronchial mucin, 600
vaccines, 99, 1547
virulence, 2021
Pulmonary clearance
M. pulmonis
C3H/HeN mice, 2631
C57BL/6N mice, 2631

Purified protein derivative
interleukins, 2126
lymphocytes, 2126
tuberculosis, 2126
Putative colonization factor
antigens, 1929
E. coli, 1929
plasmids, 1929
Pyelonephritis
E. coli, 2204
fimbriae, 2204
serological characterization, 2204
Pyocyanine
neutrophils, 559
superoxide production, 559
Pyrogenicity
endotoxins, 2574
febrile response, 2574
interferons, 2574
Pyruvate formate-lyase
S. mutans, 652
S. sanguis, 652
sugar metabolism, 652

Radioiodination
pertussis toxin
bioactivity, 1294
fetuin-agarose, 1294
Receptors
alpha-toxin, 2940
B. bronchiseptica, 1607
expression, 2355
glycoconjugates, 1607
group A streptococci, 1914
H. influenzae
epithelial cells, 2355
erythrocytes, 2355
mucosae, 1607
plasmin, 1914
Resistance
endotoxins, 1927
genetic characterization, 1919
immunoprotection, 1927
monoclonal antibodies, 1927
N. meningitidis, 1927
P. brasiliensis, 1919
Respiratory burst
activation, 2304
E. coli digestion, 2142
M. tuberculosis, 2304
neutrophils, 2304
polymorphonuclear leukocytes, 2142
Respiratory tract
H. somnus, 381
phagocytes, 381
Ribosomes
characterization, 2047
complexes, 2047
lipopolysaccharides, 2047
Rickettsia conorii
antigens, 7
host defense, 1252
interferons, 1252
monoclonal antibodies, 7
T cells, 7
Rickettsia prowazekii
glycine, 240
growth requirements, 240
serine, 240
synthesis
proteins, 2032
RNA, 2032
Rickettsia rickettsii
epitopes, 825
monoclonal antibodies, 825
proteins, 825
Rickettsia tsutsugamushi
E. coli, 1156
genes
cloning, 1156
expression, 1156
lipopolysaccharides, 2290
peptidoglycans, 2290
protein antigens, 1156
T cells, 2490
RNA
R. prowazekii, 2032
synthesis, 2032

S-1 catalytic subunit
E. coli, 1321
pertussis toxin, 1321
Saliva
adherence, 2103
agglutinin, 288
aggregation, 2364
cell-to-cell interaction
P. acnes, 1441
S. sanguis, 1441
cystic fibrosis, 2364
E. coli, 2103
epithelial cells, 2103
fibronectin, 2103
hydroxyapatite, 1441
immunoglobulin A, 288
P. aeruginosa, 2364
sialic acid, 2364
Salmonella choleraesuis
derivatives
auxotrophic, 955
galE, 955
vaccines, 955
virulence, 955
Salmonella enteritidis
cecectomy, 995
colonization resistance, 995
intestines, 995
Salmonella gallinarum
fowl typhoid, 388
plasmids, 388
virulence, 388
Salmonella minnesota
C. trachomatis, 482
epitopes, 482
lipopolysaccharides, 482, 2706
mutant recombinants
antigenicity, 482
immunogenicity, 482
serological characterization, 2706
Salmonella typhi
auxotrophic characters, 892
delayed-type hypersensitivity, 822
genetic characterization, 2797
lipopolysaccharides, 211
monoclonal antibodies, 211
porin, 822
S. flexneri, 2797
S. typhimurium, 211
teaching strain, 892
typhoid vaccine, 2797
Salmonella typhimurium
adherence, 3044
C. trachomatis, 482
colonization, 2884
complement, 2645
delayed-type hypersensitivity, 822
deletion mutants, 3035
enterocytes, 3044
epitopes, 482
fimbriae, 281
genetic characterization, 281, 2891, 3035
HEp-2 cells
entry, 1674
replication, 1674
intestines, 2884, 3044
lipopolysaccharide-deficient mutant, 2884
lipopolysaccharides, 211, 482
monoclonal antibodies, 211
mutant recombinants
antigenicity, 482
immunogenicity, 482
outer membrane proteins, 816
plasmids, 2645, 2891
porin, 822
S. typhi, 211
virulence, 2891
Schistosoma japonicum
granulocyte-macrophage colony-stimulating factor, 2042
granulomas, 2042
lymphokines, 2042
Schistosoma mansoni
antigens, 1163
genetic characterization, 1884
granulomas, 2625
liver, 2625
macrophages, 1339, 3174
larvicidal activity, 1884
vaccine-induced resistance, 1884
T cells, 1163, 2625
tumoricidal activity, 3174
vaccines, 1339
Scrub typhus
genetic characterization, 1156
protein antigens, 1156
R. tsutsugamushi, 1156
Septicemia
E. coli, 1239
iron metabolism, 1239
outer membrane proteins, 1239
Serine
R. prowazekii, 240
utilization, 240
Serological characterization
abortion, 1381
antigens, 1381
E. coli, 1336, 2204, 2706
enterotoxigenicity, 1336
fimbriae, 2204
H. somnus, 1381, 1403
lipopolysaccharides, 2706
monoclonal antibodies, 2854
N. gonorrhoeae, 273
P. aeruginosa, 2854
pneumonia, 1403
protection, 1403
protein I, 273
pyelonephritis, 2204
resistance
lipopolysaccharide subunits, 320
selective pressures, 320
S. minnesota, 2706
Serratia marcescens
fimbriae, 281, 1600
genetic characterization, 281
monoclonal antibodies, 1600, 1600

protease
suppression, 2509
virulence, 2509
Serratia spp.
hemolysins, 2554
pathogenicity, 2554
Serum resistance
delayed hypersensitivity, 3078
L. monocytogenes, 3078
N. gonorrhoeae, 3017
plasmids, 3017
sfa gene
adhesins, 1940
E. coli, 1940
fimbriae, 1940
Shiga toxin
cell entry, 298
cytotoxicity, 1533
epithelial cells, 1533
genetic characterization, 2208
ionic requirements, 298
S. dysenteriae, 298, 2208
stx determinant, 2208
Shiga-like toxin
cloning, 2675
E. coli, 2675, 3117
genetic characterization, 2675
plasmids, 3117
Shigella dysenteriae
epithelial cells, 1533
lipopolysaccharides, 1412
monoclonal antibodies, 1412
Shiga toxin, 1533, 2208
entry, 298
ionic requirements, 298
stx
localization, 2208
transposon mutants, 2208
Shigella flexneri
actin polymerization, 2681
aerobactin, 1963
antigens, 2797
binding, 1393
Congo red, 1393
eucaryotic cells, 521
genetic characterization, 1963, 2797
HeLa cells, 1393, 2681
hemin, 1393
iron metabolism, 594
lipopolysaccharides, 1412
macrophages, 521
monoclonal antibodies, 1412
mutants, 1963
myosin accumulation, 2681
phagocytosis, 2681
plasmids, 521
S. typhi, 2797
typhoid vaccine, 2797
virulence, 594, 1963
Sialic acid
adherence, 1552
complement, 174
cystic fibrosis, 2364
N. meningitidis, 174
P. aeruginosa, 2364
pellicle, 1552
S. sanguis, 1552
saliva-mediated aggregation, 2364
Sialoglycoprotein complex
agglutination, 1264
S. mutans, 1264
Skin
antigens, 245
cutaneous bacteria, 621
cutaneous leishmaniasis, 645
delayed-type hypersensitivity, 645
keratinolytic activity, 621
L. major, 645
M. bovis BCG, 245
proteins, 245
Slime production
phenotypic variation, 2870
S. epidermidis, 2870
Spherulin
antigenic identity, 2590
coccidioidin, 2590
Spleen
antibodies, 1375
antigens, 1375
B cells, 3162
immunoregulation, 1375
polysaccharides, 1375
T. gambiense, 3162
Sporozoites
antigens, 604
C. parvum
infectivity, 2081
neutralization, 2081
circumsporozoites, 2928
monoclonal antibodies, 604
P. ovale, 2928
P. yoelii, 604
Stable flies (*Stomoxys calcitrans*)
B. anthracis, 1859
bacterial transmission, 1859
Staphylococci
delta-like toxin, 2268
enterocolitis, 2268
Staphylococcus aureus
alpha-toxin, 1906, 2933, 2940
antibodies, 3030
atelectasis, 2747
basophils, 803
binding, 1878
capsules, 2191
Cowan 1, 803
E. coli, 428
endocarditis, 3030
endothelial cells, 1455, 2155
enterotoxins, 428
erythrocytes, 2940
exfoliative toxin A
genetic control, 2768
immune response, 2768
genetic characterization, 3103
histamine, 803
intrapulmonary growth, 2747
monoclonal antibodies, 2933
monolayer damage, 2155
mucoid, 2191
mutants
alpha-toxin, 3103
protein A, 3103
opsonins, 1455
oxidative response
macrophages, 2398
monocytes, 2398
neutrophils, 2398
polymorphonuclear leukocytes, 1455
polysaccharides, 2191
protein A heterogeneity
electrophoresis, 843
peptide mapping, 843
Western blot, 843
protein S, 1878
S. pyogenes, 837
toxins, 837, 1906
Staphylococcus epidermidis
phenotypic variation, 2870
slime production, 2870
Staphylococcus saprophyticus
adherence, 839
epithelial cells, 839
lipoteichoic acid, 839
Stomach
C. pylori, 2789
gastritis, 2789
Streptococci
adherence, 2878
antibodies, 1243
antigens, 674, 1151, 2759
binding, 1878
C3
synthesis stimulation, 1101
cell walls, 674
coaggregation, 2695
colony opacity, 2448
complement, 1243
epithelial cells, 2878
Fc receptor, 1233
fibronectin, 2404
genetic characterization, 1233
granulomas, 674
group A, 502, 1233, 1878, 1914, 2383, 2448
acetylation, 16
arthropathic activity, 16
cell walls, 1526
genetic characterization, 3237
M proteins, 3237
mammalian tissues, 1526
peptidoglycans, 16
polysaccharides, 16
group B, 1101, 1151, 1243, 1878, 2314, 2383, 2404, 2878
enzymes, 1
neuraminidase, 1
group C, 1878
group G, 502, 753, 1878
hemolysins, 2314
Ibc protein genes
cloning, 1151
expression, 1151
immunoglobulins, 1151, 1233
lipoteichoic acid, 2383, 2878
M proteins, 502, 753
macrophagelike cells, 1101
monoclonal antibodies, 2759
mutans, 2695
mutans streptococci, 2759
plasmin, 1914
protein S, 1878
proteins, 2448, 2759
receptors, 1914
transposon mutagenesis, 2314
type II strains, 1243
Streptococcus agalactiae
bovine mastitis, 1170
lipoteichoic acid, 2383
protein antigen, 1170
Streptococcus equi
proteins, 3181
Streptococcus mutans
acetoin, 1399
aerotolerance, 169
agglutination, 1264
antibodies, 2341, 2409
antigens, 3006
caries, 2341

cell wall antigen, 810
enzymes, 652
epitopes
carbohydrate, 810
protein, 810
genetic control, 3137
glucose-limited growth, 169
glucosyltransferase, 2176
gtfC gene
characterization, 2176
cloning, 2176
immune response, 3137
immunization, 1274, 2341
immunoglobulins, 2409
lactate dehydrogenase, 1399
major histocompatibility complex, 3137
monoclonal antibodies, 810, 1274
oxygen, 169
plasmids
characterization, 2538
cloning, 2538
polysaccharides, 3006
sialoglycoprotein complex, 1264
sugar metabolism, 652
teeth, 1274
Streptococcus pneumoniae
capsules, 1819
genetic characterization, 1184
immune complexes, 1737
immunoglobulins, 1737
pneumolysin gene, 1184
pneumonia, 1737
polysaccharides, 1819
toxins, 1184
Streptococcus pyogenes
glomeruli, 2416
kidneys, 2416
lipoteichoic acid, 2383
monoclonal antibodies, 2416
proteins, 2416
S. aureus, 837
toxins, 837
Streptococcus salivarius
adherence, 438
cell surface morphology, 438
fructosyltransferase, 698
glycosylsucrose, 698
hydrophobicity, 438
K^+, 438
Streptococcus sanguis
adherence, 123, 1484, 1552
antigens, 123
cell-to-cell interaction, 1441
crevicular fluid, 1484
E. coli, 123
enzymes, 652, 1484
fimbriae, 123
genetic characterization, 123
hydroxyapatite, 1441
P. acnes, 1441
pellicle, 1552
saliva, 1441
sialic acid, 1552
sugar metabolism, 652
Streptococcus sobrinus
affinity electrophoresis, 3011
cloning, 792
dextranase, 792
genetic characterization, 792
glucans, 3011
glucosyltransferase, 1900, 2562
immunization, 2562
monoclonal antibodies, 1900
proteins, 3011
Streptococcus spp.
Actinomyces spp., 2695
antigens, 266
binding, 1878
coaggregation, 2695
monoclonal antibodies, 266
mutans streptococci, 2695
oral microorganisms, 266
platelet aggregation, 1743
protein S, 1878
viridans group, 1743
Streptolysin O
genetic characterization, 3225, 3228
L. monocytogenes, 3225
nucleotide sequencing, 3228
thiol-activated toxins, 3228
stx determinant
S. dysenteriae, 2208
Shiga toxin, 2208
Succinic acid
Bacteroides spp., 864
intracellular pH, 864
neutrophil respiratory burst, 864
Sugar metabolism
enzymes, 652
oxygen sensitivity, 652
pyruvate formate-lyase, 652
S. mutans, 652
S. sanguis, 652
Sugars
binding, 2327
E. coli, 1837
galactose, 2327
mannose, 1837
Superoxide production
free calcium distribution, 1784
neutrophils, 1784
polymorphonuclear leukocytes, 559
pyocyanine, 559
Superoxides
H. capsulatum, 29
macrophages, 29
release, 29
Syphilis
adoptive transfer of immunity, 2502
T cells, 2502
T. pallidum, 2502

T cells
adoptive transfer of immunity, 2502
antibodies, 990
antigens, 7, 1163
B cells, 990
brain cysts, 990
C. neoformans, 1657
colonization, 2000
pathogenesis, 2000
cell line establishment, 2625
clones, 564, 2223
delayed-type hypersensitivity, 564
granulomas, 2625
immune response, 2037
M. tuberculosis, 2037, 2223
monoclonal antibodies, 7
Mycobacterium spp., 564
protection, 1163
R. conorii, 7
R. tsutsugamushi, 2490
S. mansoni, 1163, 2625
syphilis, 2502
T. gondii, 990
T. pallidum, 2502
third-order suppressor
characterization, 1657
cryptococcal antigens, 1657
Teeth
immunization, 1274
monoclonal antibodies, 1274
S. mutans, 1274
Terpenoid
dihydroheptaprenol, 2164
E. coli, 2164
resistance, 2164
Tetanus toxin
E. coli, 2541
immunization, 2541
Tetanus toxoid
epitopic response, 2658
malarial peptide, 2568
P. knowlesi, 2658
Third-order suppressor T cells
C. neoformans, 1657
characterization, 1657
cryptococcal antigens, 1657
Thymocyte-activating factor
gingival fibroblasts, 947
spontaneous production, 947
Thyroglobulins
C. difficile, 1873
toxin A, 1873
Toxic shock syndrome
cellulase, 414
female genital tract, 414
interleukins, 2865
macrophages, 2865
rabbit model, 1070
toxin, 2865
toxin infusion, 1070
Toxin A
C. difficile, 1873
purification, 1873
thyroglobulins, 1873
Toxins
actin, 1610
adherence, 86
alpha-hemolysin, 3233
alpha-toxin, 104, 1906, 2933, 2940
anaphylaxis, 1004
antigens, 1004
B. bronchiseptica, 497
atrophic rhinitis, 217
pneumonia, 217
B. parapertussis, 497
B. pertussis, 1309, 2117, 2465
B. thuringiensis subsp. *israelensis*, 1300
binding, 2940, 3126
bone resorption, 2110
botulinum toxin, 1461
C. botulinum, 1461, 3051
C. difficile, 35, 1610, 1801, 1873
C. perfringens, 118, 2912
C. sordellii toxin
characterization, 35
purification, 35
cell membranes, 1300
cellulase, 414
characterization, 963
cholera toxin, 1529, 1997, 3126
cross-reactivity, 837
cytolysis, 1300
cytotoxins, 1824
delta-like toxin, 2268
dermonecrotic toxin, 2110
diet effects, 1801

diphtheria
E. coli, 1647
mutant toxin, 1647
E. coli, 86, 329, 1077, 1329, 1668, 1824, 2057, 2546, 3233
encephalopathy, 1004
endotoxins, 409, 1121, 1622, 1668, 1927, 2230, 2456, 2471, 2865, 2962
enterocolitis, 2268
enterotoxins, 86, 329, 626, 1077, 1329, 1854, 2057, 2121, 2912, 3111
B, 837
C1, 837
epithelial cells, 1533
erythrocytes, 2940
exotoxins, 837, 2456
genetic characterization, 497, 963, 1184, 1329, 3225, 3228
genetic control, 2768
hemolysins, 1641, 3225
hypertension, 2471
immune response, 2768
immunization, 2541
immunogens, 1077
interferons, 1121
iota toxin, 118
L. monocytogenes, 1641, 3225
leukotoxins, 2348, 3233
leukotrienes, 104
lipids, 2471
listeriolysin O, 1641, 3225
monoclonal antibodies, 909, 2933
mucosae, 2110
mutants, 2465
N. meningitidis, 1927
neurotoxins, 3051
operon transcription, 1529
P. aeruginosa, 1547
P. haemolytica, 2348, 3233
P. multocida, 2110
pertussigen, 1004
pertussis toxin, 497, 909, 963, 1004, 1321, 2546
A subunit, 24
B oligomer, 1132
bioactivity, 1294
CHO cell morphology, 24
fetuin-agarose, 1294
immune response, 1132
subunits, 1309
transposons, 1309
pneumolysin, 3225
pneumolysin gene, 1184
polysaccharides, 1547
production, 1801
protease, 2057
S. aureus, 104, 1906, 2768
S. dysenteriae, 298, 1533
S. pneumoniae, 1184
Shiga toxin, 1533, 2208
entry, 298
ionic requirements, 298
Shiga-like toxin, 2675, 3117
shock, 2456
staphylococci, 2268
streptolysin O, 3225, 3228
subunits, 1321, 2546
tetanus toxin, 2541
thyroglobulins, 1873
toxic shock syndrome, 414
rabbit model, 1070
toxin infusion, 1070
toxic shock syndrome toxin, 2865
toxin A, 1547, 1873, 2768
toxin B, 1610
tracheal cytotoxin, 2117
trypsin, 1461
tumor necrosis factor, 1622
type A streptococci, 837
V. cholerae, 1529
subunit B, 1116
vaccines, 1116
V. hollisae, 626
vaccines, 1547
Vero toxin, 1824
Toxocara canis
bronchoalveolar lavage, 2132
immune response, 2132
Toxoplasma gondii
antibodies, 990, 1017
antigens, 778, 1017, 1332, 2137
B cells, 990
brain cysts, 990
E. bovis, 784
lymphokines, 784
macrophages, 784, 1635
monocytes, 784
nonoxidative killing, 1635
nucleoside triphosphate hydrolase, 1332
protection, 2137
protective immunity, 856
proteins, 2137
T cells, 990
Trachea
B. pertussis, 2117
peptidoglycans, 2117
tracheal cytotoxin, 2117
Tracheobronchial mucin
adhesins, 600
P. aeruginosa, 600
Translocation
anaerobic flora, 2689
intestines, 2689
Transposons
group B streptococci, 2314
hemolysins, 2314
mutagenesis, 2314
Tn*5*
B. abortus, 2774
mutagenesis, 2774
Treponema hyodysenteriae
cholesterol metabolism, 309
erythrocytes, 304
essential lipids, 304
Treponema pallidum
adoptive transfer of immunity, 2502
cell surface properties, 2255
dissemination, 1023
E. coli, 1106
genetic characterization, 1106
hyaluronidase, 1023
membrane protein antigen
identification, 1106
purification, 1106
syphilis, 1023
T cells, 2502
Treponema pallidum subsp. *pallidum*
complement, 2066
T. vincentii, 2066
Treponema vincentii
complement, 2066
T. pallidum subsp. *pallidum*, 2066
Trichomonas vaginalis
immunogens, 1957
phenotypic variation, 1957
epitopes, 1037
proteins, 1037
Triton X-114 phase fractionation
M. hyorhinis, 1094
membrane surface protein, 1094
monoclonal antibody killing, 1094
Trophozoites
G. lamblia
ingestion, 3155
macrophages, 3155
Trypanosoma cruzi
antigens, 403
cardiomyopathy, 3188
Chagas' disease, 3188
fibroblast-stimulating factor, 3188
immune response, 403, 2496
inhibition, 1513
interleukins, 403
lymphokines, 1513
macrophages, 2461
mesenchymal cells, 3188
myocardial cells, 1513
ornithine decarboxylase, 2461
pregnancy, 2496
Trypanosoma gambiense
B cells, 3162
spleen, 3162
Trypanosoma lewisi
complement, 358
effector cells, 358
resistance, 358
Trypsin
C. botulinum, 1461
toxins, 1461
Tubercle bacilli
macrophages, 2945
1,25$(OH)_2$-vitamin D_3, 2945
Tuberculosis
antigens, 1932
etiologic agents, 1932
interleukins, 2126
lymphocytes, 2126
M. bovis BCG, 1932
purified protein derivative, 2126
Tumor necrosis factor
crisis-form induction, 1722
endotoxins, 1622, 2230
hypersensitivity, 2230
induction, 433
L. pneumophila, 433
lactoferrin, 2956
lipopolysaccharides, 2956
malaria, 1722
monocytes, 2956
P. falciparum, 1722
polymorphonuclear leukocytes, 2956
toxins, 1622
Tumoricidal activity
inhibitors
macrophages, 3174
S. mansoni, 3174
Tumors
hypersensitivity
endotoxin, 2230
tumor necrosis factor, 2230
macrophages, 3174
S. mansoni, 3174
Tunicamycin
L. mexicana, 1692
resistance to, 1692
Typhoid
vaccine
genetic characterization, 2797
S. flexneri, 2797

S. typhi, 2797

Urease
C. neoformans, 1751
EDTA, 1751
genetic diversity, 2198
inhibition, 1751
urinary tract, 2198
Urinary tract
bacterial virulence, 1224
E. coli, 373
enzymes, 2198
host resistance, 1224
pili, 373
urease diversity
biochemical, 2198
genetic, 2198
Urinary tract infection
antibodies, 1951
cystitis, 1951

Vaccines
antibody induction, 1498
antigens, 555
C. psittaci, 2653
cholera, 1116
E. coli, 555
efficacy
diet, 314
genetics, 314
galE, 955
genetic characterization, 2797
M. bovis BCG, 314, 1476
macrophages, 1339, 1476
malaria, 2658
mutants, 99
P. aeruginosa, 99, 1547
P. multocida, 2967
pili, 555
polysaccharides, 1547
polyvalent synthetic vaccine, 1498
potassium thiocyanate extract, 2967
protective efficacy, 1116
S. choleraesuis, 955
S. flexneri, 2797
S. mansoni, 1339
S. typhi, 2797
tetanus toxoid, 2658
toxins, 1116, 1547
typhoid vaccine, 2797
V. cholerae, 1116
Vectors
B. anthracis, 1859
mosquitoes, 1859
stable flies, 1859
Vero toxin
cytotoxins, 1824
E. coli, 1824
Vibrio cholerae
adherence, 2093
genetic characterization, 1529
hemagglutination, 2093
hemagglutinins, 451, 943
immunogenicity, 477
intestines, 477
motility, 2093
mutants, 943
non-O1
El Tor-like hemolysin, 1090
enterotoxicity, 1090
operon transcription, 1529
protease, 451
subunit B, 1116
toxins, 1116, 1529
Vibrio damsela
cytolysin, 3209
erythrocytes, 3209
phospholipase D, 3209
Vibrio hollisae
enterotoxins, 626
fluid accumulation, 626
Vibrio vulnificus
colony morphology, 269
plasma kallikrein-kinin system, 1936
protease, 1936
virulence, 269
Viridans group streptococci
pathogenesis, 1743
platelets, 1743
Virulence
C. burnetii, 1144
growth temperature, 2701
H. capsulatum, 1355
L. pneumophila, 2701
lipopolysaccharide variants
interstrain, 1144
intrastrain, 1144
Virulence markers
Aeromonas spp., 3070
autoagglutination, 3070
mesophilic aeromonads, 3070
peripheral cells, 3070
1,25$(OH)_2$-Vitamin D_3
macrophages, 2945
tubercle bacilli, 2945
Vitamins
D_3, 2017
interferons, 2017
macrophages, 2017, 2945
monocytes, 2017
tubercle bacilli, 2945
1,25$(OH)_2$-vitamin D_3, 2945
Vitronectin
binding, 1878
S protein, 1878

Western blot (immunoblot)
electrophoresis, 843
peptide mapping, 843
protein A, 843
S. aureus, 843

Yeast cells
adherence, 472
E. coli, 472
Yersinia enterocolitica
arthritis, 721
experimental animal model, 721
fibrillae, 2247
HEp-2 cells
entry, 1674
replication, 1674
outer membrane proteins, 2247
phagocytosis, 1176
plasmids, 1176, 2247
Yersinia pseudotuberculosis
fibrillae, 2247
HEp-2 cells
entry, 1674
replication, 1674
outer membrane proteins, 2247
plasmids, 2247
Yersinia spp.
HeLa cells, 572
iron metabolism, 277
iron storage, 572
pesticin resistance, 572
virulence, 277